2.0 SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

This chapter of the EIR provides a detailed discussion of those CEQA issues for which project implementation would result in either: (1) significant impacts that cannot be avoided and/or (2) significant impacts that can be avoided, reduced, or minimized through mitigation measures. It includes information developed during preparation of the Negative Declaration and the response period for the Notice of Preparation (NOP). The following environmental issues are discussed in this chapter:

- Biological Resources (Section 2.1)
- Cultural Resources (Section 2.2)
- Noise (Section 2.3)

2.1 Biological Resources

This section evaluates impacts that would potentially occur to biological resources as a result of implementation of the proposed project. The section is based on a biological resources report completed by Merkel & Associates, Inc. for parcels that would have been treated had the proposed project been implemented in 2010. The complete biological resources report, titled, "San Diego County Hazardous Fuels Reduction Project - Greater Julian (Whispering Pines and SR 78-79 Corridor) Area Biological Resources Report" (dated October 2010), is included as Appendix C to this EIR.

The biological resources surveys will cover the portions of participating parcels that occur within the proposed 500-foot treatment area (see Section 1.2 – *Project Description*). A notification to all owners of eligible properties will be distributed prior to project implementation. All participating parcels will be subject to the biological resource surveys described in Chapter 1.0 (Section 1.2.3.3 – *Biological Resources Surveys and Monitoring*), regardless of whether the property was surveyed in 2010, as well as any mitigation measures identified in this section.

2.1.1 Existing Conditions

In general, the project area consists of oak woodland, coniferous forest and chaparral habitat, with smaller areas of riparian vegetation along watercourses, and grasslands and meadows in the openings of the woodland and forest habitat.

2.1.1.1 Vegetation Communities

Twenty vegetation communities were identified in the project area during the biological surveys of the participating parcels in 2010. These include: urban/developed, general agriculture, Diegan coastal sage scrub, northern mixed chaparral, mafic northern mixed chaparral, chamise chaparral, montane chaparral, non-native grassland, foothill/mountain perennial grassland, montane meadow, freshwater marsh, southern riparian forest, southern coast live oak riparian forest, southern riparian scrub, southern willow scrub, coast live oak woodland, mixed oak woodland,

Sierran mixed conifer forest, mixed evergreen forest, and Jeffrey pine forest. The mapping of vegetation communities identified a total of 1,217.8 acres where selected DDD trees would be removed from participating parcels in the project area. This mapping can be found in Appendix C of this EIR (Biological Technical Report - Figure 3).

The majority of the project area consists of mixed evergreen forest. This vegetation community is dominant particularly in the Whispering Pines and in the central portion of the SR 78 and SR 79 corridor project areas. This community supports a diverse assemblage of oak and conifer species, including coast live oak (*Quercus agrifolia* var. *agrifolia*), California black oak (*Quercus kelloggii*), canyon live oak (*Quercus chrysolepis*), California incense cedar (*Calocedrus decurrens*), white fir (*Abies concolor*), big-cone Douglas fir (*Pseudotsuga macrocarpa*) and Coulter pine (*Pinus coulteri*).

Other dominant vegetation communities in the project area include coast live oak woodland, Sierran mixed coniferous forest, and northern mixed chaparral. Coast live oak woodland exists primarily in the northern portion of the SR 78/SR 79 corridor. From north to south, this community transitions into mixed evergreen forest and then into Sierran mixed coniferous forest.

Coast live oak woodland is dominated by coast live oak with an understory of poorly developed shrubs such as laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), blue elderberry (*Sambucus mexicana*) and non-native grasses.

Sierran mixed coniferous forest includes oak species such as California black oak, as well as white fir, *Ceanothus* species, and Jeffrey pines (*Pinus jeffreyi*).

Woodland and forest vegetation communities in the project area also include a substantial number of DDD trees. These trees can provide biological value (perching, foraging, nesting, or as den sites) for wildlife species, particularly birds. Decaying logs additionally provide nutrients back into the soil.

Northern mixed chaparral consists of dense, shrubby vegetation with characteristic species such as *Ceanothus* species, sugar bush (*Rhus ovata*), mountain mahogany (*Cercocarpus betuloides* var. *betuloides*), western poison oak (*Toxicodendron diversilobum*), toyon, and chamise (*Adenostoma fasciculatum*).

Three additional chaparral vegetation community types were mapped within the project area. One area of the sensitive, mafic northern mixed chaparral was mapped in the central portion of the SR 78/SR 79 corridor where the underlying substrate consists of gabbro soils. The other two chaparral vegetation community types are chamise chaparral and montane chaparral.

Limited amounts of Diegan coastal sage scrub occur at the lower elevations of the project area. Dominant plants include white sage (*Salvia apiana*), California sagebrush (*Artemisia californica*), coast California buckwheat (*Eriogonum fasciculatum* var. *fasciculatum*), saw-toothed goldenbush (*Hazardia squarrosa*), and coastal deerweed (*Lotus scoparius*).

Grasslands, including non-native grassland and foothill/mountain perennial grassland are sporadically located throughout the project area, often as an understory or in the openings of the other vegetation types. A small area of non-native grassland mapped within the project area was dominated by non-native forbs and grasses such as short-pod mustard (*Hirschfeldia incana*), ripgut grass (*Bromus diandrus*), and slender wild oat (*Avena barbata*). Characteristic plants in the foothill/mountain perennial grassland include beardless wild ryegrass (*Leymus triticoides*), deergrass (*Muhlenbergia rigens*) and various non-native grass species. An area of foothill/mountain perennial grassland was mapped near Samagatuma Creek.

2.1.1.2 Plants

Plant species observed in the project area include native and non-native species typically associated with disturbed oak woodlands, forest and chaparral communities. Most of the plant species observed during the biological surveys include native flora; non-native species occurred primarily around single-family residences. The most common plant species noted during the biological surveys were coast live oak, California black oak, western poison oak and red brome (*Bromus madritensis* ssp. *rubens*). A complete list of plant species identified on the surveyed parcels can be found in Appendix C of this EIR (Biological Resources Report; Appendix 3 – *Flora Species Observed*).

2.1.1.3 Wildlife

Wildlife species observed in the project area include mostly native species typically known to live or forage in oak woodlands, forest and chaparral communities. The most common native wildlife species detected during the biological surveys include the side-blotched lizard (*Uta stansburiana*), western scrub jay (*Aphelocoma californica*), and California towhee (*Pipilo crissalis*). Wild turkey (*Meleagris gallopavo*), an introduced species, was detected primarily in the vicinity of rural single-family residences. A complete list of wildlife species identified on the surveyed participating parcels can be found in Appendix C of this EIR (Biological Resources Report; Appendix 4 – *Fauna Species Observed or Detected*).

Southern mule deer (*Odocoileus hemionus fuliginata*) were observed in habitat throughout the project area. Mule deer are known to occur in intermediate successional stages of forest, woodland, and brush habitats. However, they are known to prefer habitat areas that provide woody cover, shrubby openings, meadows, and perennial water sources. Tracks of mountain lion (*Felis concolor*) were also noted. Mountain lion movement closely follows the movements of mule deer, which are their primary prey

The project area also is inhabited by regionally common and migratory birds and raptors that are not designated as special-status species under CEQA, but are protected under the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Codes 3503 and 3015. No large raptor nests were observed during biological surveys; however, several smaller avian nests and suitable nesting tree cavities were observed throughout the project area. Migratory birds and raptors could forage or nest in the project area, including on DDD trees.

Habitat Connectivity and Wildlife Corridors

The Whispering Pines community and project areas along SR 78 and SR 79 serve as a core area suitable for migratory and resident wildlife populations, including large mammals such as mountain lion that require relatively large territories and ranges. The block of habitat associated with the proposed project connects to other large core habitat areas within the Cleveland National Forest and the Cuyamaca Rancho and Anza-Borrego Desert State Parks. Primary wildlife movement routes are likely to follow existing watercourses, valleys, and ridges. Both SR 78 and SR 79 inhibit some wildlife movement through the project area; however, in general, rural development does not currently constrain connectivity.

2.1.1.4 Special-Status Species

A CNDDB search identified special-status plant and wildlife species that have been reported on or in the vicinity of the project area. These species, their habitat requirements, and identified presence or potential for occurrence on the surveyed parcels are summarized in the Biological Technical Report, which has been included as Appendix C of this EIR.

A total of 52 special-status species were identified as having a high or moderate likelihood of occurrence within the project area and nine of these were detected on the surveyed parcels in 2010 (Table 2.1). Ten of the wildlife species evaluated for occurrence within the project area were federally or state-endangered or -threatened wildlife species with at least a low potential for occurrence within the project area.

For the southwestern willow flycatcher, least Bell's vireo, Stephen's kangaroo rat, southern steelhead, arroyo toad, California gnatcatcher, and greater sandhill crane, the low potential for occurrence is due to a lack of CNDDB and USFWS occurrence records in the project area and the lack of potential suitable or typical habitat for these species. For the Laguna Mountain skipper, California red-legged frog, and white-shouldered kite, the low potential for occurrence is due to a lack of CNDDB and USFWS occurrence records in the project area; however, potentially suitable habitats may be present in the project area.

2.1.1.5 Sensitive Habitats

Sensitive habitats include jurisdictional wetland and riparian habitats as defined by the U.S. Army Corps of Engineers (USACE), California Department of Fish and Game (CDFG) and the County of San Diego. Sensitive habitats would also include sensitive natural communities identified in local or regional plans, policies, regulations, or by the CDFG or USFWS. The County of San Diego Resource Protection Ordinance (RPO) defines sensitive habitat lands as land which supports *unique vegetation communities*, or the *habitats of rare or endangered species or sub-species of animals or plants* as defined by Section 15380 of the State CEQA Guidelines (14 Cal. Admin. Code Section 15000 et seq.), including the area which is necessary to support a viable population of any of the above species in perpetuity, or *land which is critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning wildlife corridor*. Unique vegetation communities are

defined as associations of rare or substantially depleted plant species, including rare or endangered species, species only found in the San Diego region, local representatives of a species or association of species not generally found in San Diego County; or vegetation communities that are outstanding examples of the type identified by the CDFG listing of community associations.

In the project area, RPO sensitive habitats lands may include freshwater marsh, southern riparian forest, southern coast live oak riparian forest, southern riparian scrub, southern willow scrub, foothill/mountain perennial grassland, Diegan coastal sage scrub, mafic northern mixed chaparral, lands that are critical for rare or endangered species or for proper functioning of a balanced natural ecosystem, or a functioning wildlife corridor.

Southern riparian forest, southern coast live oak riparian forest, southern riparian scrub, southern willow scrub and freshwater marsh are considered RPO sensitive resources because they typically support assemblages of plants and wildlife that are dependent on the conditions associated with wetland communities for breeding, roosting, and foraging, and because they are critical to the proper functioning of a balanced natural ecosystem. In the project area, southern coast live oak riparian forest and southern riparian forest are located along a portion of Banner Creek in the Whispering Pines community. Southern coast live oak riparian forest and southern riparian scrub are located along portions of Coleman and Descanso Creeks in the SR 78/SR 79 corridor. Southern willow scrub dominated by Goodding's black willow (*Salix gooddingii*) and arroyo willow (*Salix lasiolepis*) occurs in patches around Cuyamaca Reservoir. Freshwater marsh dominated by broad-leaved cattail (*Typha latifolia*) exists along Descanso and Samagatuma Creeks. The wetlands and their wetland/upland buffer zones are also considered RPO resources.

Diegan coastal sage scrub, though limited to lower elevations within the project area, may be considered RPO sensitive habitat lands because it has the potential to provide habitat for the federally threatened California gnatcatcher and an assemblage of other sensitive species associated with sage scrub habitats. Removal of Diegan coastal sage scrub is regulated by the Habitat Loss Permit (HLP) Ordinance and by the Natural Communities Conservation Planning (NCCP) Act.

Mafic northern mixed chaparral may be considered a County RPO sensitive habitat because it is located on an unusual iron and magnesium rich gabbroic soil substrate that has a high potential to support special-status plant species. This vegetation community is located in the central portion of the project area near Inspiration Point.

Foothill/mountain perennial grassland observed on the surveyed parcels was characterized by beardless wild ryegrass, deergrass and various non-native grass species.

Wetlands and Waters of the U. S.

Potential jurisdictional wetlands and waters of the U. S./streambeds also are considered County RPO sensitive resources. These wetlands are present along the delineated Watercourse and Lake Protection Zones (WPLZ) throughout the project area (see figures in Appendix C of this EIR). The functions and values of these wetlands and jurisdictional waterways are expected to be high. The

creeks and rivers that run through the project area (e.g., Banner Creek, San Diego River, Bailey Creek, Jim Green Creek, Coleman Creek, Cedar Creek, Boulder Creek, Descanso Creek, and Samagatuma Creek) have higher physical and chemical functions due to the presence of the riparian habitat and the widening of the creek in some areas. These characteristics allow for relatively high groundwater recharge, sediment retention, and nutrient transformation. The several small tributaries that flow from these creeks have relatively low physical and chemical functions characteristic of more narrow, incised drainages. In addition, the wetlands and jurisdictional waterways generally support a well-developed, mature riparian system with surrounding oak woodland and forest habitat, including a diversity of floral and faunal species, as well as several special-status species (Merkel & Associates 2010).

2.1.1.6 Applicable Regulatory Requirements

Federal Regulations and Standards

Federal Endangered Species Act

The ESA (16 U.S.C. 1513-1543) was enacted in 1973 to provide protection to threatened and endangered species and their associated ecosystems. "Take" of a listed species is prohibited except when authorization has been granted through a permit under Sections 4(d), 7, or 10(a) of the act. Take is defined as harassing, harming, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage in any of these activities without a permit.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712) was enacted in 1918. Its purpose is to prohibit the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. The USFWS maintains a list of migratory birds that are protected by this act and most birds of the San Diego region are included.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 U.S.C. 668) was first enacted in 1940 to prohibit the take, transport, or sale of bald eagles (*Haliaeetus leucocephalus*), their eggs, or any part of a bald eagle except when permitted by Secretary of Interior. In 1962, the act was amended to afford the same level of protection to the golden eagle.

Clean Water Act

In 1948, Congress first passed the Federal Water Pollution Control Act. This act was amended in 1972 and became known as the Clean Water Act (CWA)(33 U.S.C. 1251). The act regulates the discharge of pollutants into Waters of the U.S. Under Section 404, permits need to be obtained from the USACE for discharge of dredge or fill material into Waters of the U.S. Under Section 401 of the

Act, Water Quality Certification from the Regional Water Quality Control Board (RWQCB) needs to be obtained if there are to be any impacts to Waters of the U.S.

State Regulations and Standards

California Forest Practice Rules

The harvesting of timber on private lands in California is regulated by the Z'berg-Nejedly Forest Practice Act [FPA] adopted in 1973. In 1975 the courts held that State-approved timber harvests are "projects", as that term is used in the California Environmental Quality Act [CEQA]. That decision would have required that an environmental impact report [EIR] be prepared before California Department of Forestry could consider each year's slate of about 1,200-1,400 timber harvest plans (THPs); however, the Legislature amended CEQA to create the "functional equivalent process." In 1976 the Secretary of the Resources Agency certified that the CFPR/THP process is the functional equivalent of an EIR.[1] The Secretary's action took into consideration the number of CFPR sections that require protection of soil, water, plant, fish, and wildlife resources.

California Environmental Quality Act (CEQA)

CEQA requires that biological resources be considered when assessing the environmental impacts resulting from proposed actions. CEQA does not specifically define what constitutes an "adverse effect" on a biological resource. Instead, lead agencies are charged with determining what specifically should be considered an impact.

California Endangered Species Act

The California Endangered Species Act (CESA) prohibits the take of any species that the California Fish and Game Commission determines to be a threatened or endangered species and is administered by CDFG. Incidental take of listed species can be approved by CDFG.

Lake and Streambed Alteration Program

The Lake and Streambed Alteration Program is administered by CDFG and is found in Section 1600 *et seq*. of the California Fish and Game Code. CDFG is to be notified if a project will affect lake or streambed resources.

California Native Plant Protection Act

The California Native Plant Protection Act (NPPA) of 1977 (Fish and Game Code Section 1900-1913) directed the Department of Fish and Game to preserve, protect and enhance rare and endangered plants in California. The NPPA gave the California Fish and Game Commission the

[1] The removal of DDD trees is an exempt harvest practice under the CFPR. Nevertheless, the results of the lawsuit against the County included the requirement to prepare this EIR.

power to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take.

Porter-Cologne Water Quality Control Act

This act is the California equivalent of the Federal CWA. It provides for statewide coordination of water quality regulations through the establishment of the California State Water Resources Control Board (SWRCB) and nine separate Regional Water Quality Control Boards (RWQCBs) that oversee water quality on a day-to-day basis at the regional/local level.

Natural Community Conservation Planning Act of 1991

The Natural Community Conservation Planning (NCCP) Act is designed to conserve natural communities at the ecosystem scale while accommodating compatible land use. CDFG is the principal state agency implementing the NCCP Program. NCCP Plans developed in accordance with the act provide for comprehensive management and conservation of multiple wildlife species, and identify and provide for the regional or area-wide protection and perpetuation of natural wildlife diversity while allowing compatible and appropriate development and growth. The proposed project is within the unincorporated East County area for which a habitat conservation plan/NCCP plan (the East County Plan) is being prepared. The project area also includes a portion of the NCCP for Coastal Sage Scrub that requires a Habitat Loss Permit for removal of coastal sage scrub habitat.

Local Regulations and Standards

San Diego County General Plan – Open Space and Conservation Element (Chapter 5), and Community and Subregional Plans

The Open Space and Conservation Element, Chapter 5 of the General Plan (County of San Diego 2011), provides direction to future growth and development with respect to the conservation, management, and use of biological, water, agricultural, cultural, paleontological, mineral and visual resources. It also addresses open space, air quality, climate change and energy. This Element establishes goals, policies and programs to ensure that the natural resources are available for the future. Its primary objectives are to preserve a diverse range of visual, natural, and cultural resources that exemplify the County. The element strives to minimize the impact of future development in areas with significant visual, natural, and cultural resources and supports the creation and enhancement of important habitat preserves and open space areas that are well managed and maintained. The Element also promotes efficient use of water and other natural resources; strives to ensure the long-term sustainability of non-renewable resources; and supports the preservation and creation of parks, recreational facilities, and open space. Energy production, transportation, and consumption are key contributors to greenhouse gases affecting climate change, poor local air quality, and a variety of other sustainability challenges. The Conservation and Open Space Element encourages and supports land use development patterns and transportation choices that reduce pollutants and greenhouse gases. In addition, the Element encourages renewable energy production, along with efficient energy use in buildings and

infrastructure and minimizes the impacts of projects that can generate air pollutants. The Conservation and Open Space Element also sets forth goals and policies that minimize agricultural land use conflicts and support the long-term presence and viability of the County's agricultural industry.

Resource Protection Ordinance

The RPO restricts impacts on wetlands, wetlands buffers, and floodplains. The RPO states that no impacts may occur on lands determined to be wetlands as defined by the ordinance (excepting aquaculture, scientific research, and/or wetland restoration) and requires that a wetlands buffer varying between 50 and 200 feet be provided to further protect existing resources. The buffer width is determined by the quality of the wetlands functions, vegetation, soils, and the landscape context. A 50-foot wetland buffer is required for lower quality RPO wetlands, 50 to 100 feet is required for moderate to high quality RPO wetlands, and 100 to 200 feet is required for wetlands within regional wildlife corridors, wetlands that support significant populations of wetland-associated sensitive species, or where stream physical factors indicate a wider buffer is necessary to preserve existing wildlife habitat.

The RPO also restricts impacts on sensitive habitat lands, as described above under Section 2.1.1.5 Sensitive Habitats.

Habitat Loss Permit Ordinance

The Habitat Loss Permit (HLP) Ordinance was adopted in March of 1994 in response to both the listing of the California gnatcatcher as a federally threatened species, and the adoption of the Natural Communities Conservation Plan (NCCP) Act by the State of California. Pursuant to the Special 4(d) Rule under the ESA, the County is authorized to issue "take permits" for the California gnatcatcher (in the form of Habitat Loss Permits) in lieu of Section 7 or 10(a) Permits typically required from the U.S. Fish and Wildlife Service. Although issued by the County, the wildlife agencies must concur with the issuance of a HLP for it to become valid as take authorization under the ESA.

The HLP Ordinance states that projects must obtain an HLP prior to the issuance of a grading permit, clearing permit or improvement plan if the project will directly or indirectly impact any of several coastal sage scrub (CSS) habitat types. The Ordinance requires an HLP if CSS or related habitat will be impacted, regardless of whether the site is currently occupied by gnatcatchers. HLPs are not required for projects within the boundaries of the MSCP since take authorization is conveyed to those projects through compliance with the MSCP. HLPs are also not required for projects that have separately obtained Section 7 or 10(a) permits for take of the gnatcatcher.

2.1.2 Analysis of Project Effects and Determination as to Significance

This analysis is based on State CEQA Guidelines and the Guidelines for Determining Significance [for] Biological Resources (2010a) developed by the County of San Diego.

Project effects are evaluated in terms of direct, indirect and cumulative impacts to biological resources that may result from implementation of the proposed project. Impacts may also be described as permanent or temporary.

Permanent impacts are generally defined as effects that would result in an irreversible loss of biological resources.

Temporary impacts are defined as effects that would occur for the duration of the proposed project, after which time, previous habitat and wildlife functions would be restored.

Direct impacts include direct loss of vegetation communities within the area affected by the Proposed Project, and the direct loss of plant and wildlife species that utilize these areas for habitat.

Indirect impacts include both short and long-term impacts. Short-term indirect impacts are typically related to project construction and include effects such as dust, noise, lighting, erosion and pollutant run-off. Long-term indirect impacts include project effects that continue beyond the duration of project-related activities.

As described in Chapter 1.0 (Section 1.3 - *Project Description*), the project would involve the voluntary inclusion of participating parcels through private landowner enrollment in the DDD tree removal program. All landowners eligible for participation in the program would not necessarily choose to enroll. Furthermore, the specific individual DDD trees to be removed would be directed by the County-retained RPF. Thus, the precise location of trees to be removed in association with this project and, consequently, the impacts associated with the proposed project, are not quantifiable, but rather will be addressed qualitatively in this document. .

In addition, the proposed project would require wood debris staging sites for storing wood waiting to be ground or chipped, grinding and chipping the wood debris and storing chipped wood until it can be removed from the project area. Wood debris staging sites would be proposed by the Contractor and would be located on privately owned parcels or on County-owned lands. The location of the wood debris staging sites would be consistent with County land use zoning and regulations. The wood debris staging sites would also be subject to biological resource surveys. The County has a sanitation bin disposal site at 500 Pleasant View Drive in Julian that represents the type of site that is needed for staging (see Figure 4).

For each of the following subsections, CEQA and the County Guidelines for the Determining Significance for relevant issues are presented with the impact analysis following each guideline.

2.1.2.1 Biological Resources

Impacts to Special Status Species

Guideline for the Determination of Significance:

> ***The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special-status species in local or regional plans, policies, or regulations, or by CDFG or the USFWS.***

The following issues (A-L) from the County's Guidelines for Determining Significance evaluate whether the proposed project meets this guideline. The proposed project would have significant effects if:

A. *The project would impact one or more individuals of a species listed as federally or state endangered or threatened*.

Analysis. The proposed project would include the avoidance measures and design considerations identified in Chapter 1.0 (Section 1.3.1 *DDD Tree Removal Regulatory Compliance*; Section 1.3.2 – *Biological Resources Surveys*). These measures include eliminating areas supporting sensitive species from the treatment area in consultation with the USFWS and CDFG. Additionally, DDD trees marked for removal would be surveyed for the presence of active nests and holes where other animals, such as raccoons, may lodge. All trees supporting active nests and a buffer of 500 feet for nesting endangered species, would be avoided. Individual DDD trees found to support active nests or other animal lodgings would be remarked as "no cut" or "wildlife" trees, and deleted from the treatment area map. Therefore, any trees identified to be used by special-status wildlife species or found to be actively used for lodging by animals on a participating parcel, would be designated as "wildlife trees" and would not be removed.

Direct Impacts to Particular Species

Dunn's mariposa lily is a state-listed rare plant that has a moderate potential to occur in the project area due to its restriction to gabbro and metavolcanic soils that exist in the southern portion of the project area. This species is a native perennial herb that grows each year from a bulb; therefore, its presence adjacent to or within DDD tree removal treatment areas would have been identified during biological surveys described in Chapter 1.0 (Section 1.3.2 – *Biological Resources Surveys*), and impacts would be less than significant through establishment of excluded sensitive areas that would be flagged or fenced as appropriate. No other Federally or State listed or fully protected species are highly or moderately expected to occur in the project area.

During the 2010 field surveys, several federal or state-listed endangered or threatened species (Nevin's barberry, Gambel's watercress, San Bernardino blue grass, Mojave tarplant, Cuyamaca Lake downingia, Stephen's kangaroo rat, and California gnatcatcher) were determined to have a low potential for occurrence at the DDD tree removal sites due to: 1) the absence of potentially suitable habitat; 2) the location of the project area outside of the species' range; or 3) potentially suitable

habitat located in or adjacent to the designated participating parcel was found to not support any DDD trees marked for removal (Merkel & Associates 2010). These same species have a low potential to occur on the participating parcels.

The federally-listed threatened California red-legged frog, the federally-listed endangered arroyo toad, the federally and state-listed endangered southwestern willow flycatcher and least Bell's vireo, the federally endangered southern steelhead, and the state-threatened greater sandhill crane have a low potential to occupy wetlands, ponds, lakes, and watercourses in the project area (Merkel 2010). The California red-legged frogs' historic range included San Diego County but it is no longer known to occur here (USFWS 2002). The arroyo toad is analyzed under item D below. The migratory southwestern willow flycatcher and least Bell's vireo occur in San Diego County only during the spring and summer when they breed in riparian habitats, mostly at lower elevations than the proposed project. Appropriate habitat for these two bird species would be marked as sensitive and avoided. A few presumed migrant southwestern willow flycatchers were observed in the proposed project area during surveys for the San Diego County Bird Atlas, with breeding confirmed only near Lake Cuyamaca (Unitt 2004). The least Bell's vireo was not observed in the project area during the bird atlas surveys. Regarding the southern steelhead, the DDD trees that would be removed are species that do not grow in flowing streams and impacts to southern steelhead would be extremely unlikely. There have been only three records of the sandhill crane in San Diego County since 1920 (Unitt 2004); therefore, its potential for occurrence in the proposed project area is extremely low. Based on their low and extremely low potential to occur, impacts to these species are not likely and would be less than significant.

According to the biological technical report prepared for the participating parcels in 2010 (Merkel and Associates 2010), the federally-listed endangered southern California distinct population segment [DPS] of the yellow-legged frog (also known as the southern mountain yellow-legged frog or the Sierra Madre yellow-legged frog) has a moderate potential to occur and potentially suitable habitat is present in the project area. The CNDDB and the USFWS had no reported sightings of this frog in the Greater Julian Area. The southern mountain yellow-legged frog lives in ponds, tarns, lakes and streams at moderate to high elevations, and in open stream and lake margins sloping up to a depth of five to eight centimeters; however, it is now known to occur only in the San Gabriel, San Jacinto and San Bernardino Mountains, although its historical distribution included Palma Creek and Palomar Mountain in San Diego County. The Greater Julian Area is outside its current and historical range and the proposed project would not adversely affect the southern mountain yellow-legged frog; therefore, impacts would be less than significant.

Three species (federally endangered Laguna Mountain skipper, federally threatened California red-legged frog and California fully protected black-shouldered kite) were considered low potential because the CNDDB and the USFWS had no records of observations in the project area but suitable habitat is present in the proposed project area. Impacts to these three species are analyzed below.

The Laguna Mountain skipper occurs in montane meadow habitats in a very restricted range where the host plant, Cleveland's horkelia (*Horkelia clevelandii*), occurs. The Cleveland's horkelia was not observed during surveys of participating parcels and no critical habitat for the Laguna Mountain

skipper occurs in the Greater Julian Area. If the Cleveland's horkelia is observed during surveys for the additional participating parcels, the area would be marked as sensitive and no DDD trees would be removed, thereby avoiding impacts. Therefore, the impact to the Laguna Mountain skipper would be less than significant.

The California red-legged frog uses quiet permanent stream pools, marshes, and ponds. Its known elevational range extends from near sea level to elevations of about 5,200 feet, but nearly all sightings have occurred below 3,500 feet (USFWS 2010). The Greater Julian Area ranges from 2,900 to 4,700 in elevation and is within the elevational range of the red-legged frog. The nearest known location of the California red-legged frog to the Greater Julian Area is in Sentenac Canyon in the San Felipe Creek area east of Banner Grade, but the frogs have not been observed there since the 1960s (Jennings et al.1992). None have been observed in San Diego County since before 1985 and no critical habitat for the California red-legged frog has been designated in San Diego County (USFWS 2010). Potentially suitable habitat that is present in the proposed project area would be marked and removed from the treatment area to avoid potential impacts to the red-legged frog, in case it actually occurs; therefore, impacts would be less than significant.

Black-shouldered kites build nests in the crowns of trees, particularly coast live oaks or on clumps of mistletoe, both of which screen the nest well (Unitt 2004). Surveys for the San Diego County Bird Atlas (Unitt 2004) found that they nest in the Greater Julian Area between Lake Henshaw and Lake Cuyamaca but they were found more frequently in the Lake Cuyamaca area during winter than summer. Based on their known nesting locations in live trees and mistletoe, black-shouldered kites are not expected to nest in DDD trees in the proposed project area, and if they did, the tree would be marked as a wildlife tree and would not be removed during the nesting season. Impacts to black-shouldered kite would be less than significant.

If suitable habitat for any of these listed or fully protected species were to be identified near or within intended tree removal treatment areas, its habitat would be labeled by the biologist as a sensitive area and no tree removal that could impact the sensitive area would be conducted, as described in Chapter 1.0 (Section 1.3.1 – *DDD Tree Removal Regulatory Compliance*; Section 1.3.2 – *Biological Resources Surveys*). Therefore, project impacts to these species would be less than significant.

Indirect Impacts

Tree removal activities would require the use of mechanized equipment (e.g., chainsaws and chippers) that would potentially result in temporary, indirect noise impacts to federal and state-listed endangered or threatened wildlife species. With respect to wildlife foraging activity, project-related noise would be short-term and localized, with project activities restricted to a relatively small area at any one time; therefore, it is anticipated that wildlife species would forage on adjacent lands during the removal of DDD trees at a particular location as adequate foraging habitat would remain in the adjacent forested areas. However, the effects of indirect noise could include nest abandonment and subsequent loss of eggs or developing young in or near the proposed tree removal or wood debris staging areas. Potential indirect noise impacts to federal and state-listed

endangered or threatened wildlife species would be considered significant, and mitigation would be required. (Impact BI-1)

B. The project would have a perceptible long-term impact on an on-site population of a County List A or B plant species, or a County Group I animal species, or a species listed as a state Species of Special Concern.

Analysis. Golden violet is associated with sandy slopes and was detected within the project area during site surveys. Golden violet is a County of San Diego List B species because it is rare in California but more common elsewhere. Where this plant species was observed during the 2010 surveys, it was successfully marked and would be avoided. Since this species is a native perennial herb, its presence adjacent to or within tree removal treatment areas would be identified during biological surveys described in Chapter 1.0 (Section 1.3.2 – *Biological Resources Surveys*), and populations of golden violet would be excluded through the use of flagging or fencing as appropriate. As a result, the golden violet would not be impacted and the long-term survival of this species would not be adversely affected; therefore, project impacts to this List B species would be less than significant.

In a similar manner for other County List A or B plant species, DDD tree removal activities would either not occur within habitat areas for these plants, or would be redirected by design to avoid direct impacts. Therefore, potential impacts to County List A or B plant species would be less than significant.

In addition, three County Group 1 wildlife species were observed in the project area. Purple martin cavities in trees and an active purple martin nest were identified on one of the surveyed parcels, and red-shouldered hawk and turkey vulture were observed flying over the project area. The tree supporting the purple martin nest has been designated as a "wildlife tree" and flagged with tape to ensure that it is not removed. Any additional wildlife trees on participating parcels would be marked and would not be removed. Since turkey vultures nest on cliffs and under overhangs that would not be affected by tree removal activities, project implementation would not preclude the continued use of lands in the project area for nesting by this species.

Not all DDD trees will be removed on every participating parcel and snags would remain on many of the parcels for perching and roosting following project completion. A great many dead trees will remain for use by wildlife on non-participating or non-qualifying parcels in the Greater Julian Area. Based on the avoidance measures and design considerations identified in Chapter 1.0 (Section 1.3.1 – *DDD Tree Removal Regulatory Compliance*; Section 1.3.2 – *Biological Resources Surveys*), any active nests of County Group 1 wildlife species would be avoided. Thus, impacts to purple martin, red-shouldered hawk and turkey vulture would be avoided and the proposed project would result in less than significant direct impacts to these and other County Group 1 animal species.

Since all participating parcels would be surveyed, if any other Group 1 species were to be observed, the habitat where they occur would be marked as sensitive and DDD tree removal activities would avoid those areas.

Indirect impacts could affect County Group 1 animal species, as was described for listed species in Section 2.1.2.1.A.

C. The project would impact the local long-term survival of a County List C or D plant species, or a County Group 2 animal species.

Analysis. As described in Section 2.1.1 - *Existing Conditions*, two County List D plant species (southwestern spiny rush and bluish spike moss) were detected on participating parcels during the 2010 surveys. Both are County List D species that are defined as plants with limited distribution and are uncommon but are not considered rare or endangered. They are usually fairly common in the localized habitats in which they occur. No County List C species were observed.

Based on the 2010 survey data, southwestern spiny rush occurs in wetland habitats in the project area. This species would be marked as sensitive and would be avoided during project implementation as described in Chapter 1.0 (Section 1.3.2 – *Biological Resources Surveys*). Bluish spike moss occurs primarily on or near granitic rock. DDD tree removal does not include any grading or earthwork; therefore, this habitat would not be affected.

Because these species are a fairly common habitat component and not highly sensitive, and because the project impact area is small and localized, impacts from DDD tree removal are considered less than significant. In the course of pre-tree removal surveys, if these or other County List C and D plant species are detected, they will be avoided. Therefore, potential impacts to County List C or D plants species would be less than significant.

In addition, four County Group 2 wildlife species were observed in the project area. Mountain quail, western bluebird, and southern mule deer generally occur throughout the project area. The project area is also in the distribution range for mountain lion, a Group 2 species. Project implementation would not preclude the continued use of lands in the project area for these species. As indicated in Table 2-1, an additional 36 County Group 2 wildlife species have the potential to occur in the project area; though 24 of these have only a low potential for occurrence as determined by the lack of CNDDB records or potentially suitable habitat for the species. The presence of these species adjacent to or within tree removal treatment areas would be identified during biological surveys described in Chapter 1.0 (Section 1.3.2 – *Biological Resources Surveys*), and the habitat where they are observed would be marked and DDD tree removal activities would not occur in those areas.

Indirect impacts could affect County Group 2 animal species, as was described for listed species in Section 2.1.2.1.A.

D. The project would impact arroyo toad aestivation, foraging or breeding habitat. Any alteration of suitable habitat within 1 kilometer (3,280 feet) in any direction of occupied breeding habitat or suitable stream segments (unless very steep slopes or other barriers constrain movement of the arroyo toad) could only be considered less than significant if a biologically-based determination can be made that the project would not impact the aestivation or breeding behavior of arroyo toads.

Analysis. No suitable habitat for the federally endangered arroyo toad was found during the 2010 surveys of participating parcels (Merkel and Associates 2010); however, this species may occupy other portions of the project area where wetlands and watercourses exist because they are known to occur in the vicinity. Arroyo toads were detected during surveys in Cuyamaca Rancho State Park in 2002 and 2003 (Ervin and Fisher 2003). Further research in Rancho Cuyamaca found that fire can be beneficial to arroyo toads through the improvement of breeding habitat due to the addition of coarse sediments from the erosion of unvegetated slopes and the removal of dense riparian vegetation. Such an improvement in arroyo toad breeding habitat occurred in Cuyamaca Rancho State Park after the Cedar Fire and resulted in what appeared to be the range expansion of adult arroyo toads and an increase in the number of arroyo toad larvae detections (Mendelsohn *et al*. 2005; Madden-Smith *et al*. 2005). This same effect may have occurred in burned areas in the proposed project area.

Subunit 16d of arroyo toad critical habitat is along Santa Ysabel Creek between San Ysabel and Lake Henshaw within the proposed project area. Since no DDD trees occur within this area, the arroyo toad critical habitat would not be affected by the proposed project. Subunit 19a of arroyo toad critical habitat is along Old Highway 80 north of Pine Valley, which is within the area that could be treated if funding is available after the primary areas are treated (see Figure 3). All participating parcels would be surveyed and if arroyo toad habitat exists on any of them, the habitat would be marked as a Special Treatment Area and DDD trees would not be removed from that area.

Arroyo toads are primarily an upland species that goes to the water to breed and they can be found some distance from their breeding habitat. No suitable habitat for the arroyo toad was found on the participating parcels surveyed in 2010 (Merkel and Associates 2010); however, as with other special-status species, if suitable habitat for arroyo toad were to be identified near or within intended DDD tree removal treatment areas, the habitat would be labeled by the consulting biologist as a sensitive area and would be removed from the treatment area as described in Chapter 1.0 (Section 1.3.1 – *DDD Tree Removal Regulatory Compliance*; Section 1.3.2 – *Biological Resources Surveys*). Therefore, impacts to arroyo toad or arroyo toad aestivation or breeding habitat would not result from the project.

E. The project would impact golden eagle habitat.. Any alteration of habitat within 4,000 feet of an active golden eagle nest could only be considered less than significant if a biologically-based determination can be made that the project would not have a substantially adverse effect on the long-term survival of the identified pair of golden eagles.

Analysis. The proposed project would incorporate the avoidance measures and design considerations identified in Chapter 1.0 (Section 1.3.1 – *DDD Tree Removal Regulatory Compliance*; Section 1.3.2 – *Biological Resources Surveys*).

Only DDD trees within 500 feet of roads or structures would be removed, and the possibility that a nest would be that close to manmade features is low. Only about 20 percent of golden eagle nests in San Diego County are in trees and the others are all on cliff ledges (Unitt 2004). Unitt (2004) also reported that golden eagle nesting was surprisingly absent from the Cuyamaca Mountains during

surveys completed for the Bird Atlas, though breeding was confirmed in one survey grid square southwest of Julian and outside the proposed project area. No golden eagles were observed during the 2010 surveys of participating parcels and the CNDDB records did not reveal that any golden eagles have been reported from the project area (Merkel and Associates 2010).

As for all birds, trees marked for removal would be surveyed for the presence of active nests. All trees supporting active nests would be avoided. Individual trees found to support active nests would be remarked as "no cut" or "wildlife" trees and not removed. Regarding the extended area associated with golden eagle nest sites, proposed tree removal impacts would be associated with a road or residence; therefore, in most cases the DDD tree removal could occur without additional substantial adverse effect on the long-term survival of a golden eagle pair. However, trees located within 4,000 feet and in line of sight of an eagle nest would be evaluated as identified in Chapter 1.0 (Section 1.3.1 – *DDD Tree Removal Regulatory Compliance*; Section 1.3.2 – *Biological Resources Surveys*), and if DDD tree removal activity or staging would be visible from the nest, those trees would not be removed or the staging site would be appropriately relocated. The trees would be marked as "wildlife trees" and would not be cut during the golden eagle nesting season. Therefore, and with the low potential for occurrence of the golden eagle in the Greater Julian Area, potential direct impacts to golden eagle nesting and foraging would be less than significant.

DDD tree removal activities will require the use of mechanized equipment (e.g., chainsaws and chippers) that result in temporary, indirect noise impacts to raptors. With respect to foraging activity, project-related noise would be temporary, localized and restricted to a relatively small area at any one time; therefore, it is anticipated that golden eagles and raptors would use adjacent lands for foraging as adequate foraging habitat would remain in the adjacent areas. However, the effects of indirect noise on breeding activities could include nest abandonment and subsequent loss of eggs or developing young at active nests located in or near the proposed tree removal or wood staging areas. As noted above for the proposed project area, no golden eagle nesting or foraging was observed during surveys of the participating parcels in 2010, no nesting was documented for the San Diego County Bird Atlas (Unitt 2004), and no records exist in the CNDDB (as of 2009) for nesting golden eagles. Other raptors do occur in the proposed project area; therefore, potential indirect noise impacts to raptors, as special-status bird species, would be considered significant, and mitigation would be required. (Impact BI-1)

F. The project would result in the loss of functional foraging habitat for raptors. Impacts to raptor foraging habitat is considered significant; however, impacts of less than 5 percent of the raptor foraging habitat on a project site may be considered less than significant if a biologically-based determination can be made that the project would not have a substantial adverse effect on the local long-term survival of any raptor species.

Analysis. The proposed project would not result in the loss of functional foraging habitat for raptors because, other than specifically identified DDD trees, no habitat would be removed. Removing DDD trees will likely provide additional foraging habitat for raptors by opening the tree canopy. Therefore, impacts to raptor foraging habitat would be less than significant.

G. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or an area that supports multiple wildlife species.

Analysis. The proposed project would not impact the viability of a core wildlife area as the direct effects of DDD tree removal would be localized, temporary and would not result in the removal of habitat. The land would be available for wildlife use in the evenings after the day's activities are completed and all day and night after the DDD trees are removed. Furthermore, the proposed project would remove only individual DDD trees; no live trees would be removed. DDD tree removal activities would not prevent use of the remaining adjacent forest by wildlife species during work hours.

H. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term.

Analysis. The DDD tree program does not propose development and would have no permanent indirect impacts to sensitive species adjacent to the tree removal areas. The DDD tree removal activities would require the use of mechanized equipment (e.g., chainsaws and chippers) that would potentially result in temporary, indirect noise impacts to special-status wildlife species (see discussions under A, B, C, & E).

Project-related noise would be localized and project activities would be restricted to a relatively small area at any one time; therefore, wildlife species' use of adjacent forested lands for forage during tree removal activities would remain unimpeded and would provide adequate foraging habitat during project activities.

The effects of indirect noise on breeding activities could include nest abandonment and subsequent loss of eggs or developing young at active nests located in or near the proposed tree removal or wood debris staging areas. In general, potential indirect impacts on the long-term survival of special-status invertebrates, reptiles, and mammal species would be less than significant given the avoidance of habitat for those species and the localized and temporary nature of the noise disturbance. Sensitive amphibian and fish species would not be impacted as habitat types supporting these species would be avoided by project design per Chapter 1.0 (Section 1.3.1 – *DDD Tree Removal Regulatory Compliance*; Section 1.3.2 – *Biological Resources Surveys*). Potential indirect noise impacts to special-status bird species, including raptors, would be considered significant, and mitigation would be required. (Impact BI-1)

The proposed project would not be implemented at night and would not require construction or operational nighttime lighting; therefore, no indirect impacts associated with nighttime lighting would occur.

The proposed project would temporarily increase human access on participating parcels due to the presence of tree removal crews; however, these parcels are privately owned and human access would return to existing conditions following project implementation. Furthermore, as described in Chapter 1.0 (Section 1.3.2 – *Site Clean-up*), access created for project activities (temporary routes, landings[2], and skid trails) would be passively rehabilitated and blocked, if necessary, upon project completion in order to discourage unauthorized access during and after tree removal activities are completed. In addition, vehicles and heavy equipment would remain on pre-existing roads, trails, and parking areas to the extent practicable (Section 1.3.2 – *Temporary Work Areas and Easements*). The project would not increase predation or competition from domestic animals since no houses would be constructed as part of the project. Temporary, indirect impacts associated with disturbance to the project areas from pests or exotic species introduced as a result of project implementation would be minimized through preventative weed control practices as described in Chapter 1.0 (Section 1.3.2 – Equipment) that include inspection and removal of all weed species propagules from equipment prior to entering the project area. Thus, the proposed project's effect to sensitive species from human access or competition from introduced pests is considered less than significant.

I. The project would impact occupied burrowing owl habitat.

Analysis. The burrowing owl has been reported as occurring in the vicinity of SR 79 east of Lake Henshaw (Unitt 2004). They are not known to occur anywhere else in the vicinity of the proposed project. As with other special-status species, if burrowing owls or occupied burrows are found on a participating parcel, they would be avoided and impacts would be less than significant.

J. The project would impact occupied cactus wren habitat, or formerly occupied coastal cactus wren habitat that has been burned by wildfire.

Analysis. No cactus wren habitat occurs in the project area and no cactus wrens would be impacted by the proposed project.

K. The project would impact occupied Hermes copper butterfly habitat.

Analysis. The northernmost occurrences of Hermes copper butterfly are south and west of Descanso; therefore, the Hermes copper butterfly would not be impacted by the proposed project.

*L. The project would impact the nesting success of the coastal cactus wren (*Campylorhynchus brunneicapillus*), coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, tree-nesting raptors, ground-nesting raptors (i.e., burrowing owl, northern harrier), golden eagle, or light-footed clapper rail (*Rallus longirostris levipes*) through grading, clearing, fire fuel modification, or other noise-generating activities such as construction.*

[2] The landing area can be an assembly point at edge of a road or a driveway where a larger truck can pick up the material to be transported to the wood debris staging site, if the material is not chipped onsite.

Analysis. As described above in Items A and J, appropriate habitats for coastal cactus wren and coastal California gnatcatcher do not occur in the proposed project area. Appropriate habitats for the light-footed clapper rail, least Bell's vireo, and southwestern willow flycatcher do occur within the project area, including wetland and riparian areas, and watercourses. These habitats would be marked as sensitive and avoided consistent with the avoidance measures and design considerations identified in Chapter 1.0 (Section 1.3.1 – *DDD Tree Removal Regulatory Compliance*; Section 1.3.2 – *Biological Resources Surveys*). Therefore, no impacts to the nesting success of these species are anticipated as a result of the proposed project.

Tree removal activities would not have direct impacts on the nesting success of tree-nesting raptors, ground-nesting raptors, or golden eagle because of the avoidance measures and design considerations identified in Chapter 1.0 (Section 1.3.1 – *DDD Tree Removal Regulatory Compliance*; Section 1.3.2 – *Biological Resources Surveys*). These measures include eliminating areas supporting sensitive species from the treatment area in consultation with the USFWS and CDFG, and limiting work (i.e., no heavy equipment) in watercourses and wetlands. Additionally, as indicated in the analysis under parts E&F above, trees marked for removal would be surveyed for the presence of active raptor nests. All DDD trees supporting active raptor nests would be avoided. Individual trees found to support active nests would be remarked as "no cut" or "wildlife" trees, and deleted from the treatment area map.

Tree removal activities would require the use of mechanized equipment (e.g., chainsaws and chippers) that would potentially result in temporary, indirect noise impacts to tree-nesting raptors, ground-nesting raptors, or golden eagle. The effects of indirect noise on breeding activities could include nest abandonment and subsequent loss of eggs or developing young at active nests located in or near the proposed tree removal or wood staging areas. Potential indirect noise impacts to tree-nesting raptors, ground-nesting raptors, or golden eagle would be considered significant, and mitigation would be required. (Impact BI-1)

2.1.2.2 Impacts to Riparian Habitat or Sensitive Natural Community

Guideline for Determining Significance:

> ***Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service.***

The following issues (A-C) from the County's Guidelines for Determining Significance evaluate whether the proposed project meets this guideline. The proposed project would have significant effects if:

A. Project-related construction, grading, clearing, construction or other activities would temporarily or permanently remove sensitive native or naturalized habitat on or off the project site.

Analysis. In the project area, sensitive habitats include native grassland, freshwater marsh, southern riparian forest, southern coast live oak riparian forest, southern riparian scrub, southern willow scrub, Diegan coastal sage scrub, and mafic northern mixed chaparral. Tree removals would not be permitted within riparian or wetland habitats (see Chapter 1.0, Section 1.3.2 – *Biological Surveys*). Impacts to Diegan coastal sage scrub and mafic northern mixed chaparral would be limited to locations where DDD trees are identified in or adjacent to these habitat types. In these instances, trees would be felled away from these habitats where feasible, with tree removal through areas not occupied by these habitat types so as to minimize their disturbance (Chapter 1.0, Section 1.3.2 – *DDD Tree Removal*). Therefore, project-related direct effects to sensitive natural communities are considered less than significant.

Wood debris staging sites, described in Chapter 1.0 (Section 1.3.2 – *Temporary Work Areas and Easements*) would not result in direct impacts to riparian habitat or sensitive natural communities as all sensitive biological resources would be avoided by the project. Wood debris staging sites would avoid locations with riparian habitat or sensitive biological resources. To the extent possible, other staging areas proposed by the Contractor would be confined to those portions of participating parcels that have been subject to previous disturbance and dominated by non-native species characteristic of disturbance, or subject to DDD tree removals associated with the project. All staging activities would be conducted in accordance with the Best Management Practices and erosion control measures. Following completion of DDD tree removals, the staging areas would be restored to pre-project conditions as described in Chapter 1.0 (Section 1.3.2 – Site *Clean-up*); original grades onsite would be re-established if needed; and plants would be allowed to re-colonize naturally. Given that the preferred wood debris staging sites would be devoid of native or sensitive vegetation communities, temporary direct impacts are considered less than significant.

B. Any of the following would occur to or within jurisdictional wetlands and/or riparian habitats as defined by the USACE, CDFG and the County of San Diego: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity and abundance.

or

The project would not include a wetland buffer adequate to protect the functions and values of existing wetlands.

Analysis. The proposed project does not propose to remove vegetation; grade; obstruct or divert water flow; adversely change the velocity, siltation, volume of flow, or runoff rate; place fill; place structures; construct road crossings; place culverts or other underground piping; disturb the substratum; or result in any activity that may cause an adverse change in native species composition, diversity and abundance within jurisdictional wetlands and/or riparian habitats. The CFPR restricts access for vehicles and large equipment in wetland areas and buffers. According to

the CFPR, wetland buffer area widths would be determined according to the class of wetland as indicated in the CFPR, and would be adequate for the protection of wetland functions and values. Given these design considerations, the proposed project would result in no impacts to jurisdictional wetlands or riparian habitats.

C. The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of three feet or more from historical low groundwater levels.

Analysis. Water usage associated with the project would be minimal. The largest amount of water required to be available for project use would be 250 gallons for each operating crew for fire suppression. Lesser quantities (on the order of 80-100 gallons) may be used for cleaning off paved roadways or work areas. The Contractor would be responsible for securing the water to be used for the project's fire tenders, backpack pumps, dust control, etc. Potential water sources include purchase of or arrangement for water from a local source such as a property owner, local fire department, or water agency. The DDD tree removal activities would not cause a drawdown of the groundwater table to the detriment of groundwater-dependent habitats because so little water would be needed for the project. Therefore, the proposed project's potential impact to the groundwater table or groundwater-dependent habitats would be less than significant.

2.1.2.3 Impacts to Federally-protected Wetlands

Guideline for the Determination of Significance.

Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means.

Analysis. As described above in the analysis under Section 2.1.2.2 (part B & E), the proposed project would result in no impacts to jurisdictional wetlands or impacts to wetland buffers that would result in diminished functions and values of existing wetlands because tree removal activities would occur outside of jurisdictional wetlands and riparian habitats. The project also would not result in a drawdown of the groundwater table to the detriment of groundwater-dependent habitat because the amount of water required for project implementation would be minimal (250 gallons for each crew, for a total of approximately 1,500 gallons if six crews are working) and the sources of that water would not be limited to groundwater sources. Tree removal activities would be conducted in accordance with the CFPR (Section 1.3.1 – *DDD Tree Removal Regulatory Compliance*) that designate appropriate buffers and provide guidelines for the removal of DDD trees while avoiding impacts to wetland functions and values. Therefore, impacts to federally-protected wetlands would result from project implementation would be less than significant.

2.1.2.4 Impacts to Wildlife Movement and Nursery Sites

Guideline for the Determination of Significance.

> ***Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.***

The following issues (A-F) from the County's Guidelines for Determining Significance evaluate whether the proposed project meets this guideline. The proposed project would have significant effects if:

A. The project would impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.

Analysis. Each 5-person crew would work in a relatively small area of less than an acre for 2-3 days, with each crew at a different location so that the pattern of the tree removal operations would not create a barrier to wildlife movement. Since the DDD tree removal program is removing DDD trees located around structures and evacuation roads within a generally forested area, large areas of forest around each small work site would be available for wildlife movement. Thus, the proposed project would have a less than significant impact to wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.

B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage.

Analysis. The proposed project would result in no long term impacts to wildlife movement through the project area because of the temporary nature of the project. The removal of DDD trees would require a relatively small impact area on individual participating parcels and trees would be removed with small crews in different locations to avoid wildlife interference. The removal would not interfere with connectivity between blocks of habitat beyond that occurring by the existing diseased and drought affected trees and the existing residential uses in the project area. As a result, the project would have a less than significant impact on movement between blocks of habitat.

C. The project would create artificial wildlife corridors that do not allow natural movement patterns.

Analysis. The proposed project would not create artificial wildlife corridors because the DDD tree removal affects trees in proximity to structures and roads and the habitat disturbance from tree removal activities would be temporary. The removal of DDD trees would require a relatively small impact area on individual participating parcels and trees would be removed with small crews in different locations to avoid wildlife interference. As a result, the project would have a less than significant impact on wildlife movement patterns.

During project activities on a particular parcel, adjacent vegetation would be accessible and available for continued regional wildlife movement. In addition, project activities would occur during daylight hours such that the proposed project would not disrupt nocturnal wildlife movement. Thus, the proposed project would result in less than significant direct impacts to established patterns of wildlife movement.

D. The project would not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path.

Analysis. The proposed project would not alter wildlife corridors or constrain already narrow corridors because the DDD tree removal affects trees in proximity to structures and roads and the habitat disturbance from tree removal activities would be temporary.

Vegetative cover would remain available in areas within and adjacent to participating parcels such that wildlife species movement through the area could continue. In many locations that previously burned southern mixed chaparral species, such as wild lilac (*Ceanothus* sp.), proliferate today. Chaparral vegetation would continue to dominate these landscapes following DDD tree removals.

Furthermore, the tree removal contractor would not build any new fencing or other barricades that would disrupt habitat connectivity or result in the creation of artificial wildlife corridors as part of the DDD tree removal activities.

E. The project would not maintain adequate visual continuity (i.e. long lines-of-sight) within an existing wildlife corridor or linkage.

Analysis. The proposed project would not adversely affect existing wildlife corridors because the DDD tree removal affects trees would be in proximity to structures and roads and the habitat disturbance from tree removal activities would be temporary.

F. The project would increase indirect impacts, noise, and/or nighttime lighting in a wildlife corridor and linkage to levels likely to affect the behavior of the animals identified for wildlife movement.

The proposed project would not require nighttime lighting because project activities would occur during daylight hours. Project implementation would result in temporary, indirect impacts to regional wildlife movement as a result of increased noise from mechanized equipment operating during tree removal activities. This disturbance would temporarily discourage wildlife use of the immediate area where DDD trees were being removed; however, given that the proposed project would be limited to privately owned parcels in areas already subject to some level of disturbance (i.e., within 500 feet of existing structures and roads along the SR 78/SR 79 corridor), it is unlikely that project implementation would result in significant disruption of regional wildlife movement. Therefore, project-related indirect impacts to wildlife movement would be considered less than significant.

2.1.2.5 Local Policies or Ordinances

Guidelines for the Determination of Significance:

> ***Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved, local, regional or State habitat conservation plan.***

The following issues (A-H) from the County's Guidelines for Determining Significance evaluate whether the proposed project meets this guideline. The proposed project would have significant effects if:

A. *For lands outside of the MSCP, the project would impact coastal sage scrub vegetation in excess of the County's 5% habitat loss threshold as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.*

Analysis: Very limited amounts of coastal sage scrub were found to occur within the participating parcels reviewed in 2010 as described in Section 2.1.1.1. The project may impact minor amounts of understory vegetation to accommodate access to remove individual DDD trees as described in Chapter 1.0 (Section 1.2.3.5 - *Tree Removals*). These same conditions would hold true for future participating parcels that are added to the program. As such, impacts to coastal sage scrub vegetation would not exceed the County's 5% habitat loss threshold, and impacts would be less than significant.

B. *The project would preclude or prevent the preparation of the subregional Natural Communities Conservation Planning (NCCP) program. For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.*

Analysis: The purpose of the project is the removal of DDD trees and no development is proposed; therefore, the proposed project would not preclude connectivity between areas of high habitat values. As connectivity will not be affected by this project, the project would not preclude preparation of the East County Plan that is being prepared for the conservation of multiple species.

C. *The project would impact any amount of wetlands or sensitive habitat lands as outlined in the RPO.*

Analysis: As described in Section 2.1.2.2 above, no heavy equipment would be used in riparian or wetland habitats (see Chapter 1.0, Section 1.3.2 – *Biological Surveys*). Impacts to sensitive habitats such as Diegan coastal sage scrub and mafic northern mixed chaparral would be limited to locations where DDD trees are identified in or adjacent to these habitat types. In these instances, trees would be felled away from these habitats where feasible, with tree removal through areas not occupied by these habitat types so as to minimize their disturbance (Chapter 1.0, Section 1.3.2 – *DDD Tree*

Removals). Therefore, project-related impacts to RPO defined sensitive habitats are considered less than significant.

Wood debris staging sites, described in Chapter 1.0 (Section 1.3.2 – *Temporary Work Areas and Easements*) would not result in direct impacts to riparian habitat or sensitive habitats as all sensitive biological resources would be avoided in these locations by the project.

D. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the Natural Communities Conservation Planning (NCCP) Process Guidelines.

Analysis: As described in Item A above, the project as designed minimizes potential losses of coastal sage scrub habitat. Because the project would only result in minor impacts to understory vegetation and no impacts to sensitive species or habitats, mitigation for coastal sage scrub habitat loss is not required.

E. The project would not conform to the goals and requirements as outlined any applicable Habitat Conservation Plan (HCP), Habitat Management Plan (HMP), Special Area Management *Plan (SAMP), Watershed Plan, or similar regional planning effort.*

Analysis: See Item B above. No other regional planning efforts currently exist.

F. The project would reduce the likelihood of survival and recovery of listed species in the wild.

Analysis: See discussion under Section 2.12.1A above. The project would not reduce the likelihood of survival and recovery of listed species in the wild.

G. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (Migratory Bird Treaty Act).

Analysis: Implementation of the project would not result in the killing of migratory birds, or the destruction of active migratory bird nests or eggs. Avoidance measures and design considerations identified in Chapter 1.0 (Chapter 1.0 (Section 1.3.1 – *DDD Tree Removal Regulatory Compliance*; Section 1.3.2 – *Biological Resources Surveys*) include eliminating areas supporting sensitive species from the treatment area in consultation with the USFWS and CDFG, and limiting work within wetland and riparian areas, and watercourses. Additionally, DDD trees marked for removal would be surveyed for the presence of active nests. Individual trees found to support active nests would be remarked as "no cut" or "wildlife" trees, and deleted from the treatment area map.

H. The project would result in the take of eagles, eagle eggs or any part of an eagle (Bald and Golden Eagle Protection Act).

Analysis: Implementation of the project would not result in the take of eagles, eagle eggs or any part of an eagle. Avoidance measures and design considerations identified in Chapter 1.0 (Section 1.3.1 – *DDD Tree Removal Regulatory Compliance*; Section 1.3.2 – *Biological Resources Surveys*) include eliminating areas supporting sensitive species from the treatment area in consultation with

the USFWS and CDFG, and limiting work within wetland and riparian areas, and watercourses. Additionally, DDD trees marked for removal would be surveyed for the presence of active nests. Individual trees found to support active nests would be remarked as "no cut" or "wildlife" trees, and deleted from the treatment area map. See also Section 2.1.2.1-E.

2.1.3 Cumulative Impact Analysis

The potential removal of multiple trees by private landowners in the Greater Julian Area may impact sensitive biological resources, since maintenance by private landowners does not require them to avoid sensitive resources on their own property. The proposed project would not contribute substantially to this potential cumulative effect because any adverse effects to sensitive species and habitats resulting from the proposed project would be avoided through the assessment of sensitive biological resources on individual participating parcels followed by impact avoidance through project design and compliance with the CFPR for exempt harvest practices. Residual adverse effects would be mitigated through the establishment of buffers around trees supporting nesting special-status species. Thus, the proposed project would not contribute substantially to a potential cumulative biological resources impact.

Analyses of impacts to biological resources address live organisms, such as endangered, threatened or rare species; biological resources considered sensitive under state, federal, or local jurisdictions; or those biological resources covered by habitat conservation plans. Impacts to non-living resources, such as dead trees, may be considered significant if they provide habitat for those living resources that get analyzed. Since a biologist will inspect the DDD trees to be removed to ensure no sensitive living biological resources would be impacted, the cumulative impacts to biological resources of removing DDD trees would be less than significant.

2.1.4 Significance of Impacts Prior to Mitigation

Based upon the analysis presented in Section 2.1.2, the proposed project has the potential to result in temporary indirect noise impacts to nesting special-status bird species. This represents a potentially significant project-level impact.

Based upon the analysis presented in Section 2.1.3, no significant cumulative impacts to biological resources were identified; therefore, no mitigation for cumulative impacts is required.

2.1.5 Mitigation and Avoidance

Impact BI-1: Temporary indirect noise impacts to nesting special-status birds from project equipment.

M-BI-1 To mitigate indirect noise impacts from tree removal and wood debris staging site activities on nesting special-status birds (e.g., endangered, threatened, state fully protected, County Group 1 or 2), a County-approved biologist shall conduct a pre-work survey of individual work areas to determine the presence of nesting special-

status bird species that potentially would be exposed to noise-producing equipment (typically generating noise levels greater than 60 dB(A) Leq). The pre-work survey must be conducted within 10 calendar days prior to the start of tree removal activities on any particular participating parcel. Noise-producing equipment shall not be operated within 500 feet of a special-status bird's active nest on that particular site during the breeding season (January 15 – July 15) or until the County-approved consulting biologist has determined that all young have fledged or the nest is no longer active. For active golden eagle nest sites, this buffer distance shall be increased to 4,000 feet from the nest.

2.1.6 Conclusion

The proposed project has the potential to result in significant temporary adverse indirect noise impacts to special-status bird species. Having a County-approved biologist conduct a pre-work survey of individual work areas to determine the presence of active nesting of these bird species within 10 days before beginning DDD tree removal on a particular parcel, and maintaining a no-work area 500 feet around the nest (4,000 feet for an active golden eagle nest) would reduce the impacts to a less than significant level.

Table 2.1. Special-Status Species Observed, Detected, or with a Potential for Occurrence in the Project Area.

Common Name	Scientific Name	Status (Federal / State / County)
MODERATE TO HIGH POTENTIAL TO OCCUR		
Plants		
Hirshberg's rock cress	*Arabis hirshbergiae*	--/--/A
Dunn's Mariposa Lily	*Calochortus dunnii*	--/R/A
Payson's jewelflower	*Caulanthus simulans*	--/--/D
Sticky geraea	*Geraea viscida*	--/--/B
Hall's gumplant	*Grindelia hirsutula* var. *hallii*	--/--/A
San Diego County alumroot	*Heuchera rubescens* var. *versicolor*	--/--/B
California sunflower	*Hulsea californica*	--/--/A
Beautiful hulsea	*Hulsea vestita* ssp. *callicarpha*	--/--/D
Southwestern spiny rush*	*Juncus acutus* ssp. *leopoldii*	--/--/D
Desert beauty	*Linanthus bellus*	--/--/B
Indian Valley bush mallow	*Malacothamnus aboriginum*	--/--/A
Felt-leaved monardella	*Monardella hypoleuca* ssp. *lanata*	--/--/A
Hall's monardella	*Monardella macrantha* ssp. *hallii*	--/--/A
San Felipe monardella	*Monardella nana* ssp. *leptosiphon*	--/--/A
Engelmann oak/mesa blue oak	*Quercus engelmannii*	--/--/D
Cuyamaca raspberry	*Rubus glaucifolius* var. *ganderi*	--/--/A
Southern (mountains) skullcap	*Scutellaria bolanderi* ssp. *austromontana*	--/--/A
Bluish-spike moss*	*Selaginella asprella*	--/--/D
Laguna Mountains jewel-flower	*Streptanthus bernardinus*	--/--/D
Southern jewel-flower	*Streptanthus campestris*	--/--/A
Golden violet*	*Viola aurea*	--/--/B
Invertebrates		
Two-tailed swallowtail	*Papilo multiculdata*	--/--/1
Reptiles and Amphibians		
Large-blotched salamander	*Ensatina klauberi*	--/SSC/1
Coast range newt	*Taricha torosa torosa*	--/SSC/2
Southern mountain yellow-legged frog	*Rana mucosa*	E/SSC/1
Coast (San Diego) horned lizard	*Phrynosoma coronatum blainvillei*	--/SSC/2
Coastal rosy boa	*Lichanura* [= *Charina*] *trivirgata*	--/--/2
San Diego ring-necked snake	*Diadophis punctatus similis*	--/--/2
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	--/SSC/2
San Diego mountain kingsnake	*Lampropeltis zonata pulchra*	--/SSC/2
Coast (San Diego) horned lizard	*Phrynosoma coronatum blainvillei*	--/SSC/2

Common Name	Scientific Name	Status (Federal / State / County)
Birds		
Mountain quail*	*Oreortyx pictus*	--/--/2
Turkey vulture *	*Cathartes aura*	--/--/2
Sharp sharp-shinned hawk	*Accipiter striatus*	--/--/1
Red-shouldered hawk*	*Buteo lineatus*	--/--/1
Ferruginous hawk	*Buteo regalis*	--/--/1
Bald Eagle (winter)	*Haliaeetus leucocephalus*	BGEPA/FP/1
Golden eagle	*Aquila chrysaetos*	/FP/1
Lewis' woodpecker	*Melanerpes lewis*	--/--/1
Purple martin* (summer)	*Progne subis*	--/SSC/1
Western bluebird*	*Sialia mexicana*	--/--/2
Southern Calif.rufous-crowned sparrow	*Aimophila ruficips canescens*	--/--/1
Grasshopper sparrow	*Ammodramus savannarum*	--/SSC/1
Grey-headed junco	*Junco hyemalis caniceps*	--/--/2
Yellow warbler	*Dendroica petechia brewsteri*	--/SSC/2
Tri-colored blackbird	*Agelaius tricolor*	--/SSC/1
Mammals		
Pallid bat	*Antrozous pallidus*	--/SSC/2
Dulzura (California) pocket mouse	*Chaetodipus californicus femoralis*	--/SSC/2
San Diego desert woodrat	*Neotoma lepida intermedia*	--/SSC/2
American badger	*Taxidea taxus*	--/SSC/2
Southern mule deer*	*Odocoileus hemionus fuliginata*	--/--/2
Mountain lion*	*Puma concolor*	--/--/2
LOW POTENTIAL TO OCCUR		
Plants		
California androsace	*Androsace elongate* ssp. *acuta*	--/--/D
Rainbow manzanita	*Arctostaphyllos rainbowensis*	--/--/A
San Diego milkvetch	*Astragalus oocarpus*	--/--/A
Jaeger's milk-vetch	*Astragalus pachypus* var. *jaegeri*	--/--/A
Nevin's barberry	*Berberis nevinii*	E/E/A
Orcutt's brodiaea	*Brodiaea orcuttii*	--/--/A
Parish's pincushion flower	*Chaenactis parishii*	--/--/A
Ramona spineflower	*Chorizanthe leptotheca*	--/--/D
Long-spined spineflower	*Chorizanthe polygonoides* var. *longispina*	--/--/A
Delicate clarkia	*Clarkia delicata*	--/--/A
Cuyamaca cypress	*Cupressus stephensonii*	--/--/A
Tecate cypress	*Cupressus forbesii*	--/--/A
Mojave tarplant	*Deinandra mohavensis*	--/E/A

Common Name	Scientific Name	Status (Federal / State / County)
Cuyamaca larkspur	*Delphinium hesperium* ssp. *cuyamacae*	--/R/A
Cuyamaca Lake downingia	*Downingia concolor* var. *brevior*	--/E/A
Laguna Mountain goldenbush	*Ericameria cuneata* var. *macrocephala*	--/--/A
Leafy buckwheat	*Eriogonum evandium*	--/--/A
Johnston's bedstraw	*Galium johnstonii*	--/--/D
Mission Canyon blue-cup	*Githopsis diffusa* ssp. *filicaulis*	--/--/D
Palmer's grappling hook	*Harpagonella palmeri*	--/--/D
San Jacinto golden aster	*Heterotheca ssessiliflora* ssp. *sanjacintensis*	--/--/D
Laguna Mountains alumroot	*Heuchera brevistaminea*	--/--/A
Wright's hymenothrix	*Hymenothrix wrightii*	--/--/D
Short-sepaled lewisia	*Lewisia brachycalyx*	--/--/B
Warner Springs lessingia	*Lessingia glandulifera* var. *tomentosa*	--/--/A
Ocellated Humboldt lily	*Lilium humboldtii ssp. ocellatum*	--/--/D
Parish's meadowfoam	*Limnanthes gracilis* ssp. *parishii*	--/--/A
Orcutt's linanthus	*Linanthus orcuttii*	--/--/A
Laguna Mountains aster	*Dieteria (=Machaeranthera) asteroids*	--/R/B
Monkey flower	*Mimulus clevelandii*	--/--/D
Palomar monkey flower	*Mimulus palmeri (=diffusus)*	--/--/D
Gambel's watercress	*Nasturtium* [= *Rorippa*] *gambelii*	E/T/A
San Diego butterweed	*Packera (=Senecio) ganderi*	--/R/A
San Jacinto beardtongue	*Penstemon clevelandii* var. *connatus*	--/--/D
Gairdner's yampah	*Perideridia gairdneri* ssp. *gairdneri*	--/--/D
San Bernardino blue grass	*Poa atropurpurea*	E/--/A
Parish's rupertia	*Rupertia rigida*	--/--/D
Caraway-leaf gilia	*Saltugilia (=gilia) caruifolia*	--/--/D
California groundsel	*Senecio aphanactis*	--/--/B
Velvety false lupine	*Thermopsis californica var. semota*	--/--/A
San Diego County viguiera	*Viguiera laciniata*	--/--/D
Invertebrates		
Peninsular Range shoulderband snail	*Helminthoglypta traski coelata*	--/--/2
Hilda blue	*Plebejus saepiolis hilda*	--/--/1
Laguna Mountains skipper	*Pyrgus ruralis lagunae*	E/--/1
Fish		
Southern steelhead/rainbow trout	*Oncorhynchus mykiss irideus*	E/CSS/1
Reptiles and Amphibians		
Arroyo toad	*Bufo microscaphus*	E/SSC/1
California red-legged frog	*Rana draytonii*	E/SSC/1

Common Name	Scientific Name	Status (Federal / State / County)
Orange-throated whiptail	*Aspidoscelis hyperythra*	--/SSC/2
San Diego banded gecko	*Coleonyx variegates abbotti*	--/--/1
Two-striped garter snake	*Thamnophis hammondii*	--/SSC/1
South coast garter snake	*Thamnophis sirtalis*	--/SSC/1
Birds		
Bell's sage sparrow	*Amphispiza belli belli*	--/--/1
Great blue heron	*Ardea herodias*	--/--/2
Mountain plover	*Charadrius montanus*	--/SSC/2
Northern harrier	*Circus cyaneus*	--/SSC/1
Black swift	*Cypseloides niger*	--/SSC/2
Black-shouldered kite	*Elanus leucurus* [= *caeruleus*]	--/FP/1
Southwestern willow flycatcher	*Empidonax trailli extimus*	E/E/1
California horned lark	*Eremophila alpestris actia*	--/--/2
Greater sandhill crane	*Grus canadensis tabida*	--/T & FP/2
Bald eagle	*Haliaeetus leucocephalus*	--/E & FP/1
Yellow-breasted chat	*Icteria virens*	--/SSC/1
Loggerhead shrike	*Lanius ludovicianus*	--/SSC/1
California gull	*Larus californicus*	--/SSC/2
Osprey	*Pandion haliaetus*	--/--/1
California gnatcatcher	*Polioptila californica californica*	E/SSC/1
California spotted owl	*Strix occidentalis occidentalis*	--/SSC/1
Least Bell's vireo	*Vireo bellii pusillus*	E/E/1
Gray vireo	*Vireo vicinior*	--/SSC/1
Mammals		
Ringtail	*Bassariscus astutus*	--/--/2
Northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	--/SSC/2
Townsend's western big-eared bat	*Corynorhinus townsendii*	--/SSC/2
Stephen's kangaroo rat	*Dipodomys stephensi*	E/T/1
Spotted bat	*Euderma maculatum*	--/SSC/2
(Greater) western mastiff bat	*Eumops perotis californicus*	--/--/2
Western red bat	*Lasiurus blossevilli*	--/SSC/2
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	--/SSC/2
Small-footed myotis	*Myotis ciliolabrum*	--/--/2
Long-eared myotis	*Myotis evotis*	--/--/2
Fringed myotis	*Myotis thrysanodes*	--/--/2
Long-legged myotis	*Myotis volans*	--/--/2
Yuma myotis	*Myotis yumanensis*	--/--/2
Pocketed free-tailed bat	*Nyctinomops femerosaccus*	--/SSC/2

Common Name	Scientific Name	Status (Federal / State / County)
Big free-tailed bat	*Nyctinomops macrotis*	--/SSC/2
Southern grasshopper mouse	*Onychomys torridus ramona*	--/SSC/2
Los Angeles little pocket mouse	*Perognathus longimembris brevinasus*	--/SSC/2

*Observed (or for some animals,detected by sign)
E = Endangered
T = Threatened
FP = State fully protected
BGEPA = Bald and Golden Eagle Protection Act
SSC = Species of Special Concern
R = Rare

2.2 Cultural Resources

This section evaluates impacts to cultural resources which would potentially occur as a result of implementation of the proposed project. The section is based on a cultural resources investigation and documentation completed by ASM Affiliates, Inc., for parcels that would have been treated had the proposed project been implemented in 2010. If parcels that have not been surveyed are added to the program, they will be surveyed as described in Chapter 1 (Section 1.2.3.3 – *Biological Resources Surveys* and Section 1.2.3.4 – *Cultural Resources Surveys and Monitoring*). The cultural resources report, titled, "Inventory of Cultural Resources for the County of San Diego Fuel Reductions Program (Task Order 04) in Julian, Cuyamaca, and Descanso, San Diego County, California" (dated May 2010), is included as Appendix D to this EIR.

The Area of Potential Effect (APE) for the assessment of cultural resources was limited to the portions of participating parcels that occur within the proposed 500-foot treatment area (see Section 1.3 – *Project Description*). An additional notification to property owners will be distributed prior to project implementation. Should additional qualifying parcels join the program, they will be subject to the resource survey requirements described in Chapter 1.0 (Section 1.3.2 – *Cultural Resources Surveys*) as well as any mitigation measures identified in this section.

2.2.1 Existing Conditions

2.2.1.1 Site Geology

The project area is contained with the mountainous region of San Diego County. The geological makeup of the area is predominately pre-Cenozoic granitic and metamorphic rocks and Mesozoic granitic rocks, particularly tonalite and diorite. A broad fault zone comprising numerous southeast-to-northwest-tending earthquake faults, including the Elsinore and Agua Caliente faults, cuts through the region. Soils described as "excessively drained to well-drained, moderately sloping to very steep loamy coarse sands to loams on uplands in mountainous areas," characterize the zone. A variety of vegetation communities exist within this mountain region (see Section 2.1 – *Biological Resources*), including oak woodlands, native and non-native grasslands, mixed chaparral, and wetlands (ASM Affiliates 2010).

2.2.1.2 Regional and Site History

Archaeological investigations in southern California show a diverse range of human occupation extending over the past 12,000 to 10,000 years, up to the time of contact with Europeans. The area's prehistory can be divided into three periods: Paleoindian, Archaic and Late Prehistoric. (ASM Affiliates 2010).

The Paleoindian period in San Diego County is considered to have begun during the terminal Pleistocene and to have continued into the early Holocene, beginning approximately 10,000 B.P. and ending sometime between 8500 and 7500 B.P. Elsewhere in the southwestern United States, the Paleoindian period begins with the Clovis tradition. The Clovis tradition, which began in the end

of the Pleistocene around 11,200 B.P., was a widespread phenomenon throughout North America and is noted for its distinctive fluted points. Although no Clovis sites have been documented in the coastal region, isolated fluted points have occasionally been recovered, which indicates the potential for discovering terminal Pleistocene occupation. (ASM Affiliates 2010)

The Archaic period extended from 7500 B.P. (possibly as early as 8500 B.P.) to sometime between 1300 and 800 B.P. Some researchers have divided this period in various ways, including early, middle, and late phases, and differentiating between coastal and inland occupations. Inland Archaic sites in San Diego County are often assigned to the Pauma complex, lacking the shell midden and burials seen in coastal Archaic sites but distinguished from Paleoindian sites by relatively large quantities of ground stone items and flaked cobble tools and cores. (ASM Affiliates 2010)

Sites dating to the Late Prehistoric period are more numerous than any others in the region. This period dates to between 2000 and 300 B.P., and major innovations during this time include the introduction of cremations, bow-and-arrow technology, pottery production, and floodplain agriculture. No definitive dates have yet been provided for the introduction of Cottonwood Triangular and Desert side-notched projectile points that signal the shift from atlatl and dart to bow-and-arrow hunting technology. The fully developed Late Prehistoric period in San Diego County (1000-300 B.P.) is characterized by sites with small, pressure-flaked projectile points; cremation burials; ceramics, and an emphasis on inland plant food collection, processing, and storage, especially of acorns. Inland semi-sedentary villages were established along major drainages, and mountain areas were seasonally occupied to exploit acorns and pinyon nuts, resulting in permanent milling stations on bedrock outcrops. Mortars for acorn processing increased in frequency relative to seed-grinding basins. (ASM Affiliates 2010)

European contact with coastal southern California began as early as 1542, with the voyage of Juan Rodríguez Cabrillo. However, intensive interactions and contacts with interior areas only came after the establishment of the Spanish presidio and mission of San Diego in 1769. During the Spanish period, exploratory probes into eastern San Diego County were made by Pedro Fagés and others, and the southern immigrant trail came into use by colonists from Sonora. Thus, the mission culture may have begun to impact Native culture on the western extreme of the present APE. (ASM Affiliates 2010)

Between 1869 and 1870, Fred Coleman discovered gold deposits in a stream now know as Coleman Creek. This produced a mining rush in early 1870 and subsequently the historic peopling and establishment of the town of Julian. Julian developed into a boomtown by 1872, and agricultural and transportation facilities grew up around the city to support the growing population. Discovery of the Julian mines became instrumental in opening San Diego County's mountain areas to settlement and commerce. (ASM Affiliates 2010)

2.2.1.3 Review of Previous Archaeological Investigations

The County DPLU conducted a records search encompassing a ½-mi. radius around the APE, utilizing data on file at the South Coastal Information Center (SCIC) at San Diego State University. A

total of 234 sites were identified. A listing of these sites (including site type, dimensions, reference and status[3]) can be found in Table 1 of Appendix D to this EIR.

2.2.1.4 Survey Results

During the 2010 survey, 20 of the 29 previously recorded sites and isolates were identified within the APE as well as the Julian Historic District (California Historical Landmark No. 412), which falls within the ½-mi buffer of the APE. The majority of previously recorded sites in the project area are associated with either early historic gold mining or Late Prehistoric bedrock milling complexes, as would be expected, given the history of the area. There are 48 newly documented cultural resources within the project area: three new isolates and 45 new sites. Of the 48 newly documented resources, 32 are prehistoric bedrock milling sites, one is a prehistoric artifact scatter, seven are historic sites, five are multiple component sites, and three are historic isolates. In total, 69 sites and isolates were identified within the APE during the survey.

Seven previously recorded sites were not relocated, and two sites were incorrectly mapped and are actually located outside the ½-mile records search area. Five of the sites that were not relocated were reported as historic structural remains or refuse scatters, so it is possible they were viewed as modern trash and removed by landowners. The other two sites, a prehistoric bedrock milling feature and an artifact scatter, were probably destroyed when residential buildings were constructed at the site locations.

The 29 previously recorded sites and one district that were identified in the project area during the 2010 study were updated and are described below.

Previously Recorded Sites

SDI-4593 (ERS4-SJ-06): This prehistoric bedrock milling site was originally recorded in 1974 and 1975 by NPW and D. Hofmeister as five bedrock outcrops with eight mortars, basalt and quartzite flakes, a hammerstone, projectile points, potsherds and charcoal. In 1977, R. May revisited the site and observed it to be in the same condition as originally recorded, adding the possibility of a midden. Applied Earthworks updated the site record in 2005, identifying the milling features but no artifacts. During the present survey, ASM documented 12 milling features with slicks, basins, saucer mortars, and conical mortars; no associated artifacts were identified.

SDI-4596: This prehistoric bedrock milling site was originally recorded in 1975 by R. May and D. C. Hanna, Jr. as a mortar and a slick with associated brownware potsherds. During the current survey, ASM identified the milling feature as well as two pieces of metavolcanic debitage and an obsidian flake.

SDI-4597: This site was originally recorded in 1975 by D. C. Hanna, Jr. No artifacts or features were mentioned on the site form. During the current survey, ASM recorded a milling feature (20 x 60 x 4

[3] Status includes eligibility for listing on the National Register of Historic Places (NRHP) or the California Register of Historic Resources (CRHR).

m) with four milling slicks, a brownware potsherd, and a mano fragment in association with the milling feature.

SDI-8196: This prehistoric artifact scatter was originally recorded in 1980 by B. F. Smith as potsherds, flakes, and a quartzite scraper tool. Testing by Smith showed that extensive destruction to the site had occurred, and it was recommended as ineligible for CRHR and NRHP listing. During the current study, ASM was unable to relocate this site, and it is possible that it was destroyed by road enhancements and residential construction.

SDI-8845: This prehistoric bedrock milling site was originally recorded in 1981 by D. Foster as three bedrock milling features with 12 slicks, three mortars, and six ovals. A bifacial shaped mano, brownware sherds, a chert flake and an obsidian flake (collected for sourcing) were also documented. A midden deposit was also noted at this time. In 2007, Wendi Wallace, Bonnie Bruce, and Mel Sweet revisited the site and recorded four additional features with five mortars, six basins, and seven slicks. Some potsherds, debitage and flakes, and groundstone were also recorded at this time, and the surveyors noted the appearance of a midden in a road cut. During the current survey, only the portion of the site was reviewed due to access constraints; some lithics and brownware potsherds were observed.

SDI-9230: This historic road fragment (dating to 1921-1931) was originally recorded in 1982 by T. Banks. During the current survey, a prehistoric component was added to the site and includes two milling stations and a brownware sherd.

SDI-9858: This prehistoric bedrock milling site was originally recorded in 1984 by S. Hector as two milling features. Feature A has a single mortar and Feature B has a possible cupule. During the current survey, Feature A was identified, but Feature B was not. Additionally, an unrecorded feature with a milling slick was noted.

SDI-10,048: This prehistoric bedrock milling site was originally recorded in 1984 by S. Apple as bedrock mortars and basins, more than 10 mano fragments, flakes of quartz and obsidian, a scraper, a core/hammer, a piece of shell, thousands of potsherds, and more than 100 pieces of burned bone. During the current survey, ASM identified the milling outcrops and observed more than 100 brownware potsherds.

SDI-10,051: This historic ruin was originally recorded in 1984 by Apple. It constituted the remains of a collapsed store, with barbed wire, lumber, a long brick pile, metal fragments, and an abandoned orchard. During the current survey, ASM was unable to identify this site.

SDI-10,636: This site was mismapped. It is located on the Del Mar USGS 7.5' quadrangle.

SDI-10,767 (ERS4-EP-10): This prehistoric bedrock milling site was originally recorded in 1979 by Brian F. Smith as six milling features with an associated artifact scatter of three flakes and a pottery sherd. During the current survey, ASM identified only two milling features with one milling slick each, a brownware potsherd, and three pieces of metavolcanic debitage.

SDI-12,586 (ERS4-EP-32): This prehistoric bedrock milling site was originally recorded in 1991 by J. R. Cook as five milling features with 46 milling surfaces (14 basins, three mortars, and 29 slicks) and more than 30 lithic artifacts. Three 1-x-1-m test units and four shovel test pits revealed a subsurface deposit of flakes (quartz, metavolcanic, and chalcedony), brownware potsherds, and historic materials including flaked bottle glass. The site was determined to be unique, making it apparently eligible for NRHP/CRHR listing. During the current survey, ASM identified the site and observed three granite milling stations with 11 slicks, two basins, and a conical mortar at the previously identified Feature D. Six obsidian flakes, an obsidian biface, two brownware potsherds, and a volcanic hammerstone were also recorded at this location. Four milling stations with 13 slicks and four basins were recorded at previously identified Feature A. Features B, C, and E were not identified.

SDI-14,538: This A-frame historic cabin was originally recorded in 1997 by G. Fink. During the current survey, ASM identified the cabin, which was burned and destroyed by the last fire in this area. Information concerning the original location of the cabin has been updated as well.

SDI-14,539: The remains of this historic cabin were originally recorded in 1997 by G. Fink. It comprised a collapsed A-frame structure over a hole, possibly a root cellar. During the current survey, ASM was unable to relocate this site.

SDI-14,540: This site was originally recorded in 1997 by G. Fink and comprises the remains of a collapsed barn built over an earlier house foundation. During the current survey, ASM was unable to relocate this site.

SDI-17,255: This prehistoric bedrock milling site was originally recorded in 2004 by D. Pallette as two milling features. Feature A carries five oval mortars and two slicks, and Feature B has two slicks. During the current survey, both features were identified, and an additional slick was noted on Feature A.

SDI-17,323: This historic refuse scatter was originally recorded in 2005 by D. Pallette as kerosene lamp fragments, amethyst glass, and flow-blue ceramic sherds. During the current survey, ASM was unable to relocate this site.

SDI-17,324: This historic refuse scatter was originally recorded in 2005 by S. Hector as canning jars, flattened cans, glass fragments, and metal fragments. During the current study, ASM was unable to relocate this site.

SDI-17,325: This historic refuse scatter was originally recorded in S. Hector in 2005 as amethyst glass, baking powder cans, and ceramics from a household. During the current study, ASM identified the site in the same location and condition as originally recorded.

SDI-17,327: ASM originally recorded this site in 2005 as a prehistoric bedrock milling site consisting of one boulder with two mortars and a row of cupules, and one pottery sherd. During the current survey, ASM relocated the site and identified the milling features. The feature appears to have been dislodged from further up slope, possibly during installation of SR 79.

SDI-17,328: ASM originally recorded this site in 2005 as a prehistoric bedrock milling site consisting of one boulder with two mortars and two slicks, and one quartz flake. During the current survey, ASM relocated the site and identified two milling features. Feature 1 has a mortar and two slicks, and Feature 2 has two slicks.

SDI-17,329: This prehistoric bedrock milling site was originally recorded in 2005 by S. Hector as a granite outcrop with a single cupule. During the current study, ASM was unable to identify this site.

SDI-17,340 (ERS4-EP-22): This site contains the remains of historical rocks walls, a prospecting pit or collapsed mine, and an associated trash scatter.

SDI-17,513: This prehistoric bedrock milling site was originally recorded in 2005 by Applied Earthworks as an abundant collection of brownware sherds, a sparse scatter of buffware sherds, pieces of debitage (quartz and metavolcanic), and one bedrock milling outcrop with a single slick. During the current survey, ASM expanded the site to include six bedrock milling features with 18 milling slicks and a mortar. Associated with the milling are 345 brownware potsherds (one incised), 19 pieces of debitage and flakes (four obsidian, five metavolcanic, three felsites. four quartzite, and three quartz) and two quartzite cores (one of which also has some battering).

SDI-17,605 (ERS4-SJ-16): This prehistoric bedrock milling site was originally recorded in 2005 by Applied EarthWorks, Inc., as two bedrock milling outcrops with six milling slicks. During the current survey, ASM documented three bedrock milling features with eight milling slicks (see the appended milling record) and two fine-grained metavolcanic flakes.

SDI-17,606: This prehistoric bedrock milling site was originally recorded in 2005 by Applied EarthWorks, Inc., as a bedrock milling feature with a cup mortar and a collar slick. During the current survey, ASM identified the milling feature in the same location and condition.

SDI-17,621: This prehistoric bedrock milling site was originally recorded in 2005 by Applied EarthWorks as a bedrock outcrop with two mortars and a two slicks, and no associated artifacts. During the current study, ASM updated the site location and expanded the site boundaries to include an additional milling outcrop with a basin and eight slicks, and a mano fragment.

SDI-17,944/19,351: D. Pallette originally recorded SDI-17,944 in 2006. In 2009, Elizabeth Potter (ASM) recorded SDI-19,351 (just to the south of SDI-17,944) as part of the SDG&E Wood to Steel project. In 2009, the APE included the SDG&E tie line and a small buffer zone on either side. During the current study, the two sites have been merged, and the site boundary has been expanded to the north to include more features and artifacts. Newly recorded elements include 22 milling features with numerous milling surfaces, 21 brownware potsherds, five metavolcanic flakes, a core, two pieces of obsidian debitage, a quartz projectile point, a metavolcanic projectile point, two mano fragments, and a granite metate.

SDI-17,977: M. Garnsey and D. Pallette (ASM) originally recorded SDI-17,977 in 2006. ASM relocated the site and expanded it to include two milling features with five mortars and one slick, a piece of quartzite debitage, and a brownware rimsherd from a wide-mouthed vessel.

SDI-19,322: This site was mismapped. It is located on the Tecate USGS 7.5' quadrangle.

Julian Historic District: The Julian town site and surrounding area is defined by the San Diego County Zoning Ordinance Section 5749 as the Julian Historic District and is also listed as California Historical Landmark No. 412. Julian was founded following the Civil War by Confederate Veterans from Georgia and in 1869 experienced a population increase when gold was found. The historic designation predominately encompasses those building and structures that define the mining aspect of the town.

New Sites

The 48 newly discovered sites and isolates identified during the survey are briefly described below.

SDI-19963 (ERS4-EP-02): This is a prehistoric bedrock milling site consisting of one bedrock outcrop with a single milling slick.

SDI-19964 (ERS4-EP-03): This is a prehistoric bedrock milling site consisting of two milling outcrops, each containing a single milling slick.

SDI-19965 (ERS4-EP-04): This is a prehistoric artifact scatter consisting of more than 25 brownware potsherds, three pieces of debitage (quartz, quartzite, and metavolcanic), and a quartz projectile point. There are multiple bedrock features to the northeast; however, access to that area was restricted.

SDI-19966 (ERS4-EP-05): This prehistoric bedrock milling site with two granite outcrops containing one conical mortar each.

SDI-19967 (ERS4-EP-06): This is an historic marker, inscribed "1891 OTTAS SOUCHONNET."

SDI-19968 (ERS4-EP-07): This is a prehistoric bedrock milling site with one milling outcrop containing two conical mortars and four basins. A whole unifacial granitic mano, a granitic bifacial mano fragment, four pieces of fire-affected granite, two brownware potsherds, and four pieces of debitage (quartz and metavolcanic), as well as an historic component consisting of five amethyst glass shards, were also noted.

SDI-19969 (ERS4-EP-08): This is a prehistoric bedrock milling site with one bedrock outcrop containing a basin.

SDI-19970 (ERS4-EP-09): This is a prehistoric bedrock milling site with 10 bedrock outcrops containing 35 milling slicks. Thirteen brownware sherds (including one rim to a wide-mouthed vessel), a granitic metate fragment, and five pieces of debitage (three fine-grained metavolcanic, one andesite, and one felsite were also recorded.

SDI-19971 (ERS4-EP-11): This is a prehistoric bedrock milling site with five bedrock outcrops containing 29 milling slicks.

SDI-19972 (ERS4-EP-12): This is a prehistoric bedrock milling site with four bedrock outcrops containing 21 elements (seven mortars, five basins, and five milling slicks, as well as four cupules). Four pieces of debitage (felsite, fine-grained metavolcanic, and quartzite) and more than 20 brownware potsherds (one rimsherd with noticeable curvature, possibly representing a small wide-mouthed bowl) were found in association with the milling. An historical component of two amethyst glass shards, a Whiteware sherd, a solder-top can, and a tobacco tin was also recorded.

SDI-19973 (ERS4-EP-13): This is a prehistoric bedrock milling site with five bedrock outcrops containing six milling surfaces (four mortars, a milling slick, and a basin).

SDI-19974 (ERS4-EP-14): This is a prehistoric bedrock milling site with one bedrock outcrop containing two milling slicks.

SDI-19975 (ERS4-EP-15): This is a prehistoric bedrock milling site with four bedrock outcrops, each containing a single milling slick. Three pieces of debitage (obsidian, finegrained metavolcanic, and felsite) were recorded in association with the milling.

SDI-19976 (ERS4-EP-16): This is a prehistoric bedrock milling site with two bedrock outcrops containing a conical mortar, a saucer mortar, and 10 milling slicks. Feature A has a conical mortar, a saucer mortar, and seven milling slicks, and Feature B has three milling slicks. Two pieces of fire-affected rock, more than 60 brownware sherds (two rimsherds from wide-mouthed vessels), and three pieces of quartzite debitage were also recorded.

SDI-19977 (ERS4-EP-17): This is a prehistoric bedrock milling site with three bedrock outcrops containing 18 milling surfaces (16 milling slicks, a basin, and a conical mortar). A granitic mano, three pieces of debitage (quartz, quartzite, and fine-grained metavolcanic), and two brownware potsherds were also recorded.

SDI-19978 (ERS4-EP-18): This is a prehistoric bedrock milling site with one bedrock outcrop containing a basin and a mortar.

SDI-19979 (ERS4-EP-19): This is a prehistoric bedrock milling site with three bedrock outcrops containing a total of six milling slicks and two cupules.

SDI-19980 (ERS4-EP-20): This is a prehistoric bedrock milling site with one bedrock outcrop containing a single milling slick. A quartzite core, a quartzite flake, and three brownware potsherds were also recorded.

SDI-19981 (ERS4-EP-23): This historic refuse scatter consists of chicken wire, cans, two cobalt glass bottles, a colorless glass medicine bottle, two amethyst glass shards, an amethyst glass bottle, two aqua glass shards, and decorated rubber fragments.

SDI-19982 (ERS4-EP-24): This prehistoric bedrock milling feature consists of a granite outcrop with a single milling slick.

SDI-19983 (ERS4-EP-25): This historic foundation and refuse scatter consists of a rock and concrete house foundation, more than 45 historic whiteware sherds, three blue-transfer ware sherds, seven aqua glass shards, 23 green glass shards, and 26 amethyst glass shards.

SDI-19984 (ERS4-EP-26): This prehistoric bedrock milling site consists of two granite outcrops, each with a conical mortar and an associated collar slick. A granite unifacial metate fragment was also recorded.

SDI-19985 (ERS4-EP-27): This prehistoric bedrock milling site consists of five granite outcrops with 21 milling surfaces (13 slicks, five basins, and three mortars) and six metavolcanic flakes.

SDI-19986 (ERS4-EP-28): This prehistoric bedrock milling site consists of a granite outcrop with 14 basins, a conical mortar, and four slicks.

SDI-19987 (ERS4-EP-29): This prehistoric bedrock milling site consists of three granite outcrops with a total of eight milling slicks.

SDI-19988 (ERS4-EP-30): This prehistoric bedrock milling site consists of six granite outcrops with 21 slicks, nine basins, and a conical mortar. Eight brownware sherds, two volcanic flakes, a piece of quartz shatter, and a granitic mano were also recorded. A midden deposit can be seen among the granite outcrops.

SDI-19989 (ERS4-EP-31): This prehistoric bedrock milling site has two granite outcrops with two conical mortars and a slick.

SDI-19990 (ERS4-EP-33): This prehistoric bedrock milling site consists of one granite outcrop with a single milling slick.

SDI-19991 (ERS4-SJ-01): This is an historic trash dump consisting of broken glass, cans, ceramic sherds, and miscellaneous unidentified rusted metal.

SDI-19992 (ERS4-SJ-02): This is a prehistoric bedrock milling site with two milling outcrops containing a conical mortar and a milling slick. An isolated “CROWN” cola bottle was also observed.

SDI-19993 (ERS4-SJ-03): This multiple component site consists of two loci. Locus A is on the west side of a seasonal drainage, and Locus B is on the east side. Locus A is comprised of nine bedrock milling features and sits within an area of granite outcrops situated in an oak grove. A scatter of ceramic artifacts is located a few meters from the parcel owners’ driveway within the boundary of Locus A. Locus B consists of an historic house foundation and chimney made of local rock and mortar.

SDI-19994 (ERS4-SJ-04): This is an historic house with a collapsed roof and green painted exterior.

SDI-19995 (ERS4-SJ-05): This is a prehistoric milling site with one bedrock outcrop containing 22 milling surfaces (six conical mortars, eight milling slicks, four basins, and four saucer mortars). Two brownware potsherds were also observed at this site.

SDI-19996 (ERS4-SJ-07): This is a prehistoric milling site with five bedrock outcrops containing seven milling slicks. An isolated historic solder-top can was also observed at this site.

SDI-19997 (ERS4-SJ-08): This is a prehistoric bedrock milling site with four milling outcrops containing six milling slicks.

SDI-19998 (ERS4-SJ-09): This is a prehistoric milling site with one bedrock outcrop containing one conical mortar.

SDI-19999 (ERS4-SJ-10): This is a prehistoric milling site with one bedrock outcrop containing a milling slick and a basin. Two large mammal bones were also observed.

SDI-20000 (ERS4-SJ-11): This is a prehistoric milling site with three bedrock outcrops, each containing a milling slick.

SDI-20001 (ERS4-SJ-12): This is a prehistoric milling site with one bedrock outcrop containing a basin and a saucer mortar. Two brownware potsherds, two quartz flakes, and two fine-grained metavolcanic flakes were also recorded.

SDI-20002 (ERS4-SJ-13): This is a prehistoric milling site with four bedrock outcrops containing a total of 11 milling slicks.

SDI-20003 (ERS4-SJ-14): This is a prehistoric bedrock milling complex with 14 milling features containing 55 milling surfaces (34 milling slicks, four basins, 15 oval mortars, and two conical mortars). Seven brownware potsherds, five fine-grained metavolcanic flakes, three quartz flakes, and an obsidian flake were also recorded.

SDI-20004 (ERS4-SJ-15): This is a prehistoric milling site with one bedrock outcrop containing a single milling slick. Ten quartz flakes, 11 fine-grained metavolcanic flakes, a quartz projectile point fragment, and two fine-grained metavolcanic core fragments were also noted, as well as an historic component consisting of five amethyst glass shards and a horseshoe. Three mammal bones were also observed.

SDI-20005 (ERS4-SJ-17): This is a prehistoric milling site with three bedrock outcrops, each containing a single milling slick. No artifacts were observed in association with the features.

P-37-031476 (ERS4-SJ-I-02): This historic road segment is approximately 141 ft. long and 10 ft. wide.

P-37-031477 (ERS4-SJ-I-05): This historic road segment is approximately 128 ft. long and 10 ft. wide, and has an associated historic road marker.

ERS4-SJ-I-01: This isolate consists of two historic highway markers.

ERS4-SJ-I-03: This historic isolate consists of one cone-top beer can.

ERS4-SJ-I-04: This historic isolate consists of a trailer-mounted "DeWalt" radial arm saw.

2.2.1.5 Applicable Regulatory Requirements

Federal Regulations and Standards

National Register of Historic Places

The National Register is an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment. Listing of private property on the National Register does not prohibit under Federal law or regulation any actions which may otherwise be taken by the property owner with respect to the property.

State Regulations and Standards

Traditional Tribal Cultural Places

The Traditional Tribal Cultural Places Bill of 2004 requires local governments to consult with Native California groups at the earliest point in the local government land use planning process. The consultation intends to establish a meaningful dialogue regarding potential means to preserve Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance. It allows for tribes to hold conservation easements and for tribal cultural places to be included in open space planning.

California Environmental Quality Act (CEQA)

The California Environmental Quality Act requires that cultural resources be considered when assessing the environmental impacts of proposed projects. Specifically applicable provisions of the State CEQA Guidelines are summarized in Section 3.0.

California Register of Historical Resources

The California Register's purpose is to develop and maintain, "an authoritative guide to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate which properties are to be protected, to the extent prudent and feasible, from substantial adverse change." Sites, places, or objects, which are eligible to the National Register, are automatically included in the California Register.

Human Remains

HSC Section 7050.5 requires that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlay adjacent remains until the County Coroner has examined the remains. If the Coroner determines the remains to be those of an

American Indian, or has reason to believe that they are those of an American Indian, the Coroner shall contact, by telephone within 24 hours, the Native American Heritage Commission. In addition, any person who mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor.

Local Regulations and Standards

Resource Protection Ordinance

The majority of development in the County is subject to RPO. This ordinance requires that cultural resources be evaluated as part of the County's discretionary environmental review process and if any resources are determined significant under RPO, they must be preserved. RPO prohibits development, trenching, grading, clearing, and grubbing, or any other activity or use that may result in damage to significant prehistoric or historic site lands, except for scientific investigations with an approved research design prepared by an archaeologist certified by the Society of Professional Archaeologists.

Conservation Element of the San Diego County General Plan

The Conservation Element of the San Diego County General Plan provides policies for the protection of natural resources. These policies provide guidance for the preservation of cultural resource.

Mills Act (San Diego County) – Historical Property Contract

Ordinance 9425 amended by Ordinance 9628 provides for reduced property taxes on eligible historic properties, if the owner agrees to maintain and preserve the property. Preservation of properties is to be in accordance with the standards and guidelines set forth by the Secretary of the Interior. The Mills Act serves as an economic incentive to owners to preserve their historic properties for the benefit of the entire community.

San Diego County Local Register of Historical Resources

The San Diego County Local Register's purpose is to develop and maintain, "an authoritative guide to be used by state agencies, private groups, and citizens to identify the County's historical resources and to indicate which properties are to be protected, to the extent prudent and feasible, from substantial adverse change." Sites, places, or objects, which are eligible to the National Register or California Register, are automatically included in the San Diego County Local Register.

San Diego County Historic Site Board

The function of the County of San Diego Historic Site Board (Advisory Body) is to provide decision makers with input regarding cultural resources (archaeological and historic). The Historic Site Board is responsible for reviewing resources seeking participation in the Mills Act and projects with significant cultural resources.

Zoning Ordinance

Sections 5700-5749 of the Zoning Ordinance provide the procedures for landmarking Historic/Archaeological resources with an "H" (Historic) Designator. The application of this designator to a property requires the owner to submit and receive approval by the Department of Planning and Land Use of a site plan for any changes to the exterior of a resource. In addition, it identifies the only situations in which a landmarked resource may be demolished or relocated.

The "J" Designator is reserved for the Julian Historic District. In addition to the requirements of the "H" Designator, "J" Designated properties are referred to the Julian Historic District Architectural Review Board for recommendation.

2.2.2 Analysis of Project Effects and Determination as to Significance

This analysis is based on State CEQA Guidelines Appendix G and the Guidelines for Determining Significance [for] Cultural Resources (2007a) developed by the County of San Diego. For each of the following subsections, CEQA and the County Guidelines for the Determining Significance for relevant issues are presented with the impact analysis following each guideline.

2.2.2.1 Change in the Significance of a Historical Resource

Guideline for the Determination of Significance.

> ***Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the State CEQA Guidelines. This shall include the destruction, disturbance or any alteration of characteristics or elements of a resource that cause it to be significant in a manner that would change its status relative to eligibility for listing on the California Register of Historic Resources.***

Analysis. As detailed above in Section 2.2.1.3, the project area contains a total of twenty historic resources comprised of eleven historic resource sites (including the Julian Historic District), three historic isolates, and six multiple component sites.

With the exception of the Julian Historic District, none of the historic resource sites has been evaluated for NHRP/CRHR eligibility; the three historic isolates are ineligible. Due to the presence of historical resources within the project area as well as the potential for these sites to be NHRP/CRHR eligible, the potential exists for historic resources to be affected during tree removal activities on individual participating parcels. As indicated in Chapter 1.0 (Section 1.3.2 – *Cultural Resources Surveys*), areas with significant cultural resources that have the potential to be impacted by tree removal would be deleted from the treatment area. DDD trees located within a significant cultural resource site may be identified by the archaeologist to be removed, if based on tree size the removal is feasible without impacting the integrity of the cultural resource. The tree would be cut into smaller pieces and hand carried out of the significant cultural resource site. As such, potential impacts to historical resources would be less than significant.

2.2.2.2 Change in the Significance of a Historical Resource

Guideline for the Determination of Significance.

> ***Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the State CEQA Guidelines. This shall include the destruction or disturbance of an important archaeological site or any portion of an important archaeological site that contains or has the potential to contain information important to history or prehistory.***

Analysis. As detailed above in Section 2.2.1.3, the project area contains a total of fifty-six prehistoric archaeological resources comprised of forty-nine prehistoric bedrock milling sites, one prehistoric artifact scatter, and six multiple component sites.

With the exception of one site (SDI-12,586) that has previously been recommended as eligible for listing on the CRHR, none of the prehistoric archaeological resource sites has been evaluated for NHRP/CRHR eligibility. Due to the large number of archaeological resources within the project area as well as the potential for these sites to be NHRP/CRHR eligible, the potential exists for prehistoric archaeological resources to be affected during tree removal activities. As indicated in Chapter 1.0 (Section 1.3.2 – *Cultural Resources Surveys*), areas with significant cultural resources that have the potential to be impacted by tree removal would be deleted from the treatment area. DDD trees located within a significant cultural resource site may be identified by the archaeologist as acceptable for removal, if based on tree size the removal is feasible without impacting the integrity of the cultural resource. The tree would be cut into smaller pieces and hand carried off of the significant cultural resource site. As such, potential impacts to archaeological resources would be less than significant.

2.2.2.3 Disturbance of Human Remains

Guideline for the Determination of Significance.

> ***Disturb any human remains, including those interred outside of formal cemeteries.***

Analysis. Field and record surveys conducted by ASM Affiliates, Inc. in 2010 did not identify the presence of any human remains, including those interred outside of formal cemeteries. Nonetheless, the potential exists that human remains may be uncovered during tree removal activities, such as by moving tree debris across the ground, which would be regarded as a significant impact for which mitigation would be required. (Impact CU-1)

2.2.2.4 Damage to Significant Cultural Resources as Defined by RPO

Guideline for the Determination of Significance.

> ***Propose activities or uses damaging to significant cultural resources as defined by the RPO and fails to preserve those resources.***

Analysis. Due to the presence of prehistoric and historic cultural resources within the project area as well as the potential for these sites to be NHRP/CRHR eligible, the potential exists for RPO-defined cultural resources to be affected during tree removal activities on individual participating parcels. As indicated in Chapter 1.0 (Section 1.3.2 – *Cultural Resources Surveys*), areas with significant cultural resources that have the potential to be impacted by tree removal would be deleted from the treatment area. Dead trees located within a significant cultural resource site may be identified by the archaeologist as acceptable for removal if, based on tree size, the removal is feasible without impacting the integrity of the cultural resource. The tree would be cut into smaller pieces and hand carried off of the significant cultural resource site. As such, potential impacts to archaeological resources would be less than significant.

2.2.3 Cumulative Impact Analysis

According to CEQA, the importance of cultural resources comes from the research value and the information that they contain. Therefore, the issue that must be explored in a cumulative analysis is the cumulative loss of information. The potential occurrence of multiple tree removal activities by private landowners in the Greater Julian Area may impact significant cultural resources, since such maintenance activities by private landowners does not require them to avoid sensitive resources on their own property. Implementation of other types of projects, such as development projects, in the Greater Julian Area may also impact sensitive cultural resources. The proposed project would not contribute to this potential cumulative effect because any adverse effects to significant cultural resources resulting from the proposed project would be avoided through the assessment of cultural resources on individual participating parcels followed by impact avoidance through project design and compliance with CFPR regulations. The potential occurrence of multiple tree removal activities by private landowners in the same geographic area as the proposed project would not result in cumulative harm to individual cultural resource sites as the individual tree removal efforts would not overlap with specific project sites. Furthermore, the proposed project has been designed to avoid potentially significant cultural resources through the assessment and avoidance of cultural resources on individual participating parcels. Thus, the proposed project would not contribute to a cumulative cultural resources impact.

2.2.4 Significance of Impacts Prior to Mitigation

Based upon the analysis presented in Section 2.2.2, the proposed project has the potential to affect previously unknown human remains. This represents a potentially significant project-level impact.

Based upon the analysis presented in Section 2.2.3, no significant cumulative impacts to cultural resources were identified; therefore, no mitigation for cumulative impacts is required.

2.2.5 Mitigation and Avoidance

Impact CU-1: Direct Impact to Previously Unknown Human Remains.

CU-1 In the event that human remains are encountered during DDD tree removal activities, the activities at the location must be halted in the immediate vicinity of the find, and the County Coroner must be contacted. If the coroner determines the remains are Native American, the coroner shall immediately contact the Native American Heritage Commission for the most likely descendant. Pursuant to the provision of Public Resources Code section 5097.98, the most likely descendant may then make recommendations regarding the disposition of the remains.

2.2.6 Conclusion

The proposed project has the potential to result in significant adverse direct impacts to cultural resources by the potential to find human remains. There are no reasonably foreseeable projects in the immediate vicinity that could contribute to cumulative cultural resources impacts. Implementation of Mitigation Measures CU-1 (requiring that work be halted in the vicinity of the find and appropriate contacts be made for disposition of the remains) would ensure that any cultural resources impacts caused by DDD tree removal activities would be reduced to a less than significant level.

2.3 Noise

This section evaluates noise impacts that would potentially occur as a result of implementation of the proposed project.

2.3.1 Existing Conditions

2.3.1.1 Community Noise Characteristics

This section describes the physical characteristics of sound and the characteristics of noise in the Greater Julian Area. An understanding of these characteristics is necessary for evaluating environmental effects of noise from the proposed project. The methods and metrics used to quantify noise exposure, human response, and relative judgment of loudness are also discussed, and noise levels of common noise environments are presented.

Noise is generally defined as loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity and interferes with or disrupts normal activities. The effects of noise on people can be grouped into four general categories:

- subjective effects (dissatisfaction, annoyance)
- interference effects (communication and sleep interference, learning)
- physiological effects (startle response)
- physical effects (hearing loss)

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. The subjective responses of individuals to similar noise events are diverse and influenced by many factors including the type of noise, the perceived importance of the noise, its appropriateness to the setting, duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity.

Interference effects of environmental noise refer to those effects that interrupt daily activities and include interference with human communication activities such as normal conversation, watching television, and telephone conversation, and interference with sleep. Sleep interference effects can include both awakening from sleep and arousal to a lesser state of sleep.

Sound is a physical phenomenon consisting of minute vibrations that travel through a medium, such as air, and are sensed by the human ear. Sound is generally characterized by several variables, including frequency and amplitude. Frequency describes the sound's pitch (tone) and is measured in cycles per second (Hertz [Hz]), while amplitude describes the sound's pressure (loudness). Because the range of sound pressures that occur in the environment is extremely large, it is convenient to express these pressures on a logarithmic scale that compresses the wide range of pressures into a more useful range of numbers. The standard unit of sound measurement is the decibel (dB). Hz is a measure of how many times each second the crest of a sound pressure wave passes a fixed point. For example, when a drummer beats a drum, the skin of the drum vibrates a given number of times per second. If the drum vibrates 100 times per second, it generates a sound

pressure wave that is oscillating at 100 Hz, and this pressure oscillation is perceived by the ear/brain as a tonal pitch of 100 Hz. Sound frequencies between 20 and 20,000 Hz are within the range of sensitivity of the healthy human ear.

Sound levels are expressed by reference to a specified national/international standard. The sound pressure level is used to describe sound pressure (loudness) and is specified at a given distance or specific receptor location. In expressing sound pressure level on a logarithmic scale, sound pressure (dB) is referenced to a value of 20 micropascals (μPa). Sound pressure level depends not only on the power of the source, but also on the distance from the source to the receiver and the acoustical characteristics of the sound propagation path (absorption, reflection, etc.).

Outdoor sound levels decrease logarithmically as the distance from the source increases. This decrease is due to wave divergence, atmospheric absorption, and ground attenuation. Sound radiating from a source in a homogeneous and undisturbed manner travels in spherical waves. As the sound waves travel away from the source, the sound energy is dispersed over a greater area, decreasing the sound pressure of the wave. Spherical spreading of the sound wave from a point source reduces the noise level at a rate of 6 dB per doubling of distance.

Atmospheric absorption also influences the sound levels received by an observer and the greater the distance traveled, the greater the influence of the atmosphere and the resultant fluctuations. Atmospheric absorption becomes important at distances greater than 1,000 feet. The degree of absorption varies depending on the frequency of the sound as well as the humidity and temperature of the air. For example, atmospheric absorption is lowest (i.e., sound carries further) at high humidity and high temperatures, and lower frequencies are less readily absorbed (i.e., sound carries further) than higher frequencies. Over long distances, lower frequencies become dominant as the higher frequencies are more rapidly attenuated. Turbulence, gradients of wind, and other atmospheric phenomena also play a significant role in determining the degree of attenuation. For example, certain conditions, such as temperature inversions, can channel or focus the sound waves, resulting in higher noise levels than would result from simple spherical spreading.

Sound from a tuning fork contains a single frequency (a pure tone), but most sounds in the environment do not consist of a single frequency. Instead, they are a broad band of many frequencies differing in sound level. Because of the broad range of audible frequencies, methods have been developed to quantify these values into a single number representative of human hearing. The most common method used to quantify environmental sounds consists of evaluating all frequencies of a sound according to a weighting system that is reflective of human hearing characteristics. Human hearing is less sensitive at low frequencies and extremely high frequencies than at the mid-range frequencies. This process is termed “A weighting,” and the resulting dB level is termed the “A-weighted” decibel (dBA).

Because A-weighting is designed to emulate the frequency response characteristics of the human ear and reflect the way people perceive sounds, it is widely used in local noise ordinances and state and federal guidelines, including those of the State of California and the County of San Diego. Unless specifically noted, the use of A-weighting is always assumed with respect to environmental sound and community noise, even if the notation does not include the “A.”

Although dBA may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most ambient environmental noise includes a mixture of noise from nearby and distant sources that creates an ebb and flow of sound including some identifiable sources plus a relatively steady background noise in which no particular source is identifiable. A single descriptor, termed the equivalent sound level (Leq), is used to describe sound that is constant or changing in level. Leq is the energy-mean dBA during a measured time interval. It is the "equivalent" sound level produced by a given constant source equal to the acoustic energy contained in the fluctuating sound level measured during the interval. In addition to the energy-average level, it is often desirable to know the acoustic range of the noise source being measured. This is accomplished through the maximum Leq (Lmax) and minimum Leq (Lmin) indicators that represent the root-mean-square maximum and minimum noise levels measured during the monitoring interval. The Lmin value obtained for a particular monitoring location is often called the acoustic floor for that location.

To describe the time-varying character of environmental noise, the statistical or percentile noise descriptors L10, L50, and L90 may be used. These are the noise levels equaled or exceeded during 10%, 50%, and 90% of the measured time interval. Sound levels associated with L10 typically describe transient or short-term events; L50 represents the median sound level during the measurement interval; and L90 levels are typically used to describe background noise conditions.

The Day-Night Average Sound Level (Ldn or DNL) represents the average sound level for a 24 hour day and is calculated by adding a 10 dBA penalty to sound levels during the night period (10:00 p.m. to 7:00 a.m.). The Ldn is the descriptor of choice used by nearly all federal, state, and local agencies throughout the United States to define acceptable land use compatibility with respect to noise. Within the State of California, the Community Noise Equivalent Level (CNEL) is sometimes used. CNEL is very similar to Ldn, except that an additional 5 dB penalty is applied to the evening hours (7:00 p.m. to 10:00 p.m.). Because of the time-of-day penalties associated with the Ldn and CNEL descriptors, the Ldn or CNEL dBA value for a continuously operating sound source during a 24 hour period will be numerically greater than the dBA value of the 24-hour Leq. Thus, for a continuously operating noise source producing a constant noise level operating for periods of 24 hours or more, the Ldn will be 6 dB higher than the 24-hour Leq value. For convenience, a summary of common noise metrics is provided in Table 2.2. To provide a frame of reference, common sound levels are presented in Table 2.3.

Human Perception of Noise Change Levels

In terms of human perception, a sound level of 0 dBA is approximately the threshold of human hearing and is barely audible by a healthy ear under extremely quiet listening conditions. This threshold is the reference level against which the amplitude of other sounds is compared. Normal speech has a sound level of approximately 60 dBA. Sound levels above about 120 dBA begin to be felt inside the human ear as discomfort progressing to pain at still higher levels. Humans are much better at discerning relative sound levels than absolute sound levels. The minimum change in the sound level of individual events that an average human ear can detect is about 1 to 3 dBA. A 3 to 5 dBA change is readily perceived. An increase (or decrease) in sound level of about 10 dBA is usually perceived by the average person as a doubling (or halving) of the sound's loudness.

Because of the logarithmic nature of the decibel, sound levels cannot be added or subtracted directly and are somewhat cumbersome to handle mathematically. However, some simple rules are useful in dealing with sound levels. First, if a sound's acoustical energy is doubled, the sound level increases by 3 dB, regardless of the initial sound level. Thus, for example: 60 dB + 60 dB = 63 dB, and 80 dB + 80 dB = 83 dB. However, an increase of approximately 10 dBA is required to double the perceived loudness of a sound, and a doubling or halving of the acoustical energy (a 3 dB difference) is at the lower limit of readily perceived change.

Sensitive Noise Receptors

Noise-sensitive receptors are defined as areas where there is a reasonable degree of sensitivity to noise. These areas include residential areas, hospitals, schools, churches, libraries, sensitive species habitat, and other areas where low noise levels are an important attribute of the environment. Lands surrounding the project area support a variety of uses that range from rural residential landscapes to higher density development located in the urban fringe of Julian. Noise sensitive receptors within the project area are limited primarily to rural residences adjacent to where the tree removal process would occur. Two schools, Julian Elementary and Julian Union High School, as well as several day care facilities, are located approximately ¼ mile from and outside of the proposed project corridor.

Existing Noise Sources and Noise Levels

Existing noise sources within the project area include traffic traveling along SR 78 and SR 79. Existing vehicular traffic along SR 78 within the project vicinity is greatest within the Julian area and ranges between 4,950 and 5,700 annual average daily trips (AADT) and between 2,750 and 3,500 AADT along SR 79 (Caltrans 2009a). There is minimal traffic along the rural residential streets serving areas where project operations would occur. The nearest airport to the project is the Ramona Airport, located about 14 miles west, and the project site occurs beyond the 60 dB CNEL contour of the airport.

Existing ambient noise levels vary depending on proximity to local roadways and highways. Ambient noise levels in rural areas away from major roadways are typically in the range of 40 to 50 dBA. Locations near roadways and highways are typically in the range of 65 to 75 dBA (Caltrans 2004).

Relevant Noise Regulations and Standards

The Greater Julian Area is located within the unincorporated portions of San Diego County. At the time this document was prepared, the County was in the process of updating their existing General Plan, which was approved in 1975.

County of San Diego – General Plan Noise Element

The County's Noise Element states that exterior CNEL above 60 dB and/or interior noise levels above 45 dB for single family residences may have an adverse effect on public health (exterior CNEL above 65 dB for multifamily). In response, the County requires that an acoustic evaluation be prepared when it appears that a noise sensitive land use would be subject to noise levels greater than 60 dB CNEL.

This is a planning standard for permanent development and does not relate to the short-term, temporary activities associated with the proposed project.

County of San Diego – Municipal Code Noise Ordinance (§36.404—410)

Chapter 4 of the San Diego County Code of Regulatory Ordinances (*e.g.*, the County noise ordinance) addresses noise abatement and control. The County noise ordinance specifies sound level limits for all created noise sources that give consideration to both the zone in which the noise occurs (*e.g.*, residential, agriculture, or commercial zones) and the time of day (or night) when the noise occurs. The tree removal activities under the proposed project would be temporary and would fall under the category of "construction" with respect to County noise ordinance requirements.

Section 36.409 of the ordinance states:

> Except for emergency work, it shall be unlawful for any person to operate construction equipment or cause construction equipment to be operated, that exceeds an average sound level of 75 decibels for an eight-hour period, between 7 a.m. and 7 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

Section 36.417(b)(1) of the ordinance identifies the following exemption:

> Noise associated with routine property maintenance used either in part or in whole for residential purposes, provided activity takes place between 7 a.m. and 8 p.m. on any day except Sunday or between 10 a.m. and 8 p.m. on Sunday.

2.3.2 Analysis of project Effects and Determination as to Significance

This analysis is based on State CEQA Guidelines Appendix G and the Guidelines for Determining Significance [for] Noise (2009) developed by the County of San Diego. The proposed project is also analyzed relevant to the County's Noise Ordinance.

For each of the following subsections, CEQA and the County Guidelines for the Determining Significance for relevant issues are presented with the impact analysis following each guideline.

2.3.2.1 Exposure Associated with Generation of Noise Level in Excess of Established Standards

The limits in the noise ordinance represent appropriate numerical standards by which to measure and evaluate noise impacts from temporary sources such as those associated with the proposed project.

Guideline for the Determination of Significance.

> ***Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.***

Analysis. As described in Chapter 1.0 (Section 1.2.3.12 – *Project Schedule*) tree removal activities on the participating parcels would occur between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday, and Saturday work would be limited to the wood debris staging site, in compliance with the County's noise ordinance. Project-related activity would include tree cutting on individual

private parcels and chipping/grinding activity at the wood debris staging site. Tree cutting would involve a 4 to 5 person crew at each cutting location, and 6 to 12 crews would work each day.

Tree cutting would involve the following tasks:

- Chainsaw operations to fell the DDD trees.
- Chainsaw operations to cut the felled tree into smaller pieces that can be transported by tractor or hand carried to the landing area(s).
- Use of hand tools to groom the work area following tree removal.
- Use of a power blower for limited operations, such as blowing driveways and egress and ingress roads to remove small debris created during the tree removal operations. Use of a power blower at limited times to free traveled road surfaces of tree debris created during removal operations.
- Use of a tractor (skid steer/skidder) to pick up large pieces of tree material and transport it from the tree removal area to the landing area.

Activity at the wood debris staging site would include:

- Trucks delivering and dumping wood material from parcel job sites. Wood material can be whole pieces of wood, wood debris not chipped at the participating parcel, and/or wood chips.
- Tractor or wheeled loader moving dumped material into sorted piles and/or transporting material directly into a tub grinder or chipper.
- Wood being ground into chips in a tub grinder or chipped in a wood chipper.
- Chipped wood material being deposited in piles. Tractor or wheeled loader scooping chips and/or wood material from piles into trucks for transport to the biomass-fueled power plant.

Table 2.4 summarizes equipment that would be used during wood cutting operations and at the wood debris staging site. A "reasonable worst-case" approach was taken in the identification of equipment noise limits in order to conservatively assess project-generated temporary noise. Noise levels for the chainsaw, tractor, and truck are typical noise levels reported in standard reference documents (FHWA 2006 and Hoover & Keith 2000). Blower noise levels reported in reference 3 of Table 2.4 indicate noise levels in the range of 64 to 76 dBA at 50 feet for a variety of blowers. The highest reported sound level of 76 dBA is used in this analysis. Brueck (2008) reports noise levels in the range of 82 to 93 dBA at 50 feet for a variety of woodchippers. The highest reported sound level of 93 dBA is used in this analysis.

To assess a reasonable worst-case condition for tree cutting it is assumed that four chainsaws, one tractor, one power blower, one woodchipper and two large trucks would operate over an 8-hour period at a tree removal site. Table E-1 in Appendix E shows the anticipated operating scenario. At the wood debris staging site it is assumed that one tractor/loader, one wood chipper, and two trucks would operate over an 8-hour period at the site. Table E-2 in Appendix E shows the

anticipated operating scenario. Based on these operating scenarios the 8-hour average sound level (Leq) at 50 feet produced at a tree removal site and a wood debris staging site was calculated. The distance to the 75 dBA contour (i.e., the distance within which 75 dBA would be exceeded) has been calculated using point source attenuation of 6 dB per doubling of distance. Table 2.5 summarizes the results of the analysis.

The results in Table 2.5 indicate that exceedance of the 75 dBA noise ordinance limit could occur within about 330 feet of a tree removal site and about 460 feet of a wood debris staging area. Where property lines for adjacent properties are within these distances, the County's noise ordinance guidelines would be exceeded and noise impacts would potentially be significant requiring mitigation. However, per the exemption in the County's noise ordinance (see *Relevant Noise Regulations and Standards* above), the noise generated on private parcels associated with tree removals would not be subject to the 75 dBA noise ordinance limit because it is considered general maintenance of the parcel; therefore, noise impacts at tree removal sites would be less than significant. Noise impacts resulting from the processing of woody materials into chips at the wood debris staging site would not qualify for the exemption and would be subject to the 75 dBA noise ordinance limit at the property line. As such, noise impacts associated with the wood debris staging site(s) would be significant, and mitigation would be required. (Impact NO-1)

2.3.2.2 Exposure Associated with Generation of Excessive Groundborne Vibration or Groundborne Noise Levels

Guideline for Determining Significance.

> ***Expose persons to or generate excessive groundborne vibration or groundborne noise levels.***

Analysis. Operation of non-dynamic equipment such as tractors and trucks typically do not generate perceptible vibration beyond about 50 feet (Caltrans 2004). Because of this and because operations would be short-term, project equipment operations are not expected to result in an adverse vibration effect. The impact of large felled trees hitting the ground may result in perceptible vibration; however, because these would also be short-term, no adverse effects are anticipated. Therefore, the impacts associated with project-related groundborne vibration and groundborne noise would be considered less than significant.

2.3.2.3 Substantial Permanent Increase in Ambient Noise Levels

Guideline for Determining Significance.

> ***Cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.***

Analysis. The proposed project involves only temporary project noise associated with the removal of DDD trees. No permanent increases in existing ambient noise levels would occur. As such, the project would not result in any permanent increase in existing ambient noise levels in the surrounding areas.

2.3.2.4 Substantial Temporary or Periodic Increase in Ambient Noise Levels

Guideline for Determining Significance.

> ***Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.***

Analysis. The magnitude of noise increases associated with the project would vary widely depending on the ambient noise level and the proximity of tree removal and wood debris staging site operations to residences. Increases in quiet rural areas could be as high as 30 or 40 dB. In areas where ambient noise levels are much higher (i.e., near roadways or highways) the increases in the noise would likely be less. Temporary increases in noise greater than about 10 dB are considered substantial when noise cannot be limited to 75 dBA or less at the adjacent property line. As discussed above, noise from tree cutting could exceed 75 dBA within about 330 feet of the operations and noise from the wood debris staging area could exceed 75 dBA within about 460 feet of operations, based on the assumptions presented in Appendix E. Per the exemption described in the County's noise ordinance (see *Relevant Noise Regulations and Standards* above), the noise generated on private parcels associated with tree removals would not be subject to the 75 dBA noise ordinance limit; therefore, noise impacts at tree removal sites would be less than significant.

At the wood debris staging sites, the proposed project would cause a substantial temporary or periodic increase in ambient noise levels in the staging site vicinity above levels existing without the project. Noise impacts resulting from the processing of woody materials into chips at the wood debris staging site would be subject to the 75 dBA noise ordinance limit at the property line. As such, noise impacts associated with the wood debris staging site, which could exceed 75 dBA within about 460 feet of operations, would be significant, and mitigation would be required. (Impact NO-2)

2.3.2.5 Exposure to Excessive Noise Levels Associated with a Public Airport

Guideline for Determining Significance.

> ***Expose people residing or working in the project area to excessive noise levels (for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport).***

Analysis. The proposed project is located about 14 miles west of the nearest airport, which is in Ramona, California, and is not located within an Airport Land Use Compatibility Plan (ALUCP). Therefore, the proposed project would not cause people residing or working in the project area to be exposed to excessive aircraft noise levels.

2.3.2.6 Exposure to Excessive Noise Levels Associated with a Private Airstrip

Guideline for Determining Significance.

> ***Expose people residing or working in the project area to excessive noise levels (for a project within the vicinity of a private airstrip).***

Analysis. The proposed project is not located within a one-mile vicinity of a private airstrip and there are no known new private airport projects within the vicinity. Therefore, the proposed

project would not cause people residing or working in the project area to be exposed to excessive aircraft noise levels.

2.3.3 Cumulative Impact Analysis

The anticipated noise impacts of the proposed project are temporary and of short duration at any one DDD tree removal site. The project has been designed so that noise generating equipment at the wood debris staging sites meets the requirements of the noise ordinance. Therefore, the proposed project would not contribute to a cumulative noise impact.

2.3.4 Significance of Impacts Prior to Mitigation

Based upon the analysis presented in Section 2.3.2, the proposed wood debris staging site(s) have the potential to result in temporary direct noise levels at the property line in excess of the County's noise ordinance standards that would temporarily substantially increase ambient noise levels above existing levels in the vicinity without the project. This represents a potentially significant project-level impact.

These impacts are potentially significant and mitigation would be required. Based upon the analysis presented in Section 2.3.3, no significant cumulative noise impacts were identified; therefore, no mitigation for cumulative impacts is required.

2.3.5 Mitigation and Avoidance

Impact NO-1: Temporary direct noise impacts at wood debris staging site(s) in excess of noise ordinance standards.

Impact NO-2: Substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

M-NO-1 To mitigate direct noise impacts from wood debris staging site activities, the following items shall be incorporated into the wood debris staging site development:

1) Selection of wood debris staging sites that are not within 500 feet of residences, when feasible;

2) Placement of the tub grinder (the noisiest piece of equipment) at the wood debris staging site as far away from adjacent sensitive receptors as possible. To meet the noise ordinance limit of 75 decibels or less at the property line, the grinding/chipping operation at the wood debris staging site will need to be at least 460 feet from the property line or any occupied property where the noise is being received.

3) Operation of the tub grinder at the wood debris staging site shall not exceed 5 hours per day and shall be timed to occur in the middle of the day;

4) Identification of a minimum of two wood debris staging sites to alternate between every two to three months so that equipment noise at any one staging site would be temporary in nature; and

5) Temporary placement and stockpiling of wood material and chip piles in such a manner as to provide additional vertical screening for noise level reduction while maintaining compliance with State and County regulations for fire safety and wood debris clearance standards.

2.3.6 Conclusion

The proposed project has the potential to result in significant adverse direct noise impacts at the property line of the wood debris staging site. Design measures for the selection of wood debris staging sites and the placement of noise-producing equipment on these sites have been incorporated into the project, and the mitigation measures (positioning of the wood debris staging site and tub grinder, limited operation of the tub grinder, alternating between at least two wood debris staging sites, and using wood piles for noise screening) would reduce the impacts to a less than significant level.

Table 2.2. Definition of Sound Measurements

Sound Measurements	Definition
Decibel (dB)	A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.
A-Weighted Decibel (dBA)	An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
Maximum Sound Level (Lmax)	The maximum sound level measured during the measurement period.
Minimum Sound Level (Lmin)	The minimum sound level measured during the measurement period.
Equivalent Sound Level (Leq)	The equivalent steady state sound level that in a stated period of time would contain the same acoustical energy.
Percentile-Exceeded Sound Level (Lxx)	The sound level exceeded "x" percent of a specific time period. L10 is the sound level exceeded 10 percent of the time.
Day-Night Level (Ldn)	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Community Noise Equivalent Level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the A-weighted sound levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Peak Particle Velocity (Peak Velocity or PPV)	A measurement of ground vibration defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state. PPV is usually expressed in inches/sec.
Frequency: Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.

Table 2.3. Typical A-weighted Sound Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet		
	100	
Gas lawnmower at 3 feet		
	90	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	70	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60	
		Large business office
Quiet urban daytime	50	Dishwasher in next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime		
	30	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20	
		Broadcast/recording studio
	10	
	0	

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Source: Caltrans 2009b.		

Table 2.4. Equipment Sound Levels

Equipment	Source Level at 50 Feet	Reference
Chainsaw	85 dBA	Chainsaw[1]
Tractor	84 dBA	Tractor [2]
Power blower	76 dBA	Loudest blower [3]
Wood chipper	93 dBA	Loudest woodchipper [4]
Large truck	76 dBA	Dump truck [2]
Tub grinder	96 dBA	Tub grinder [5]

[1] Hoover, Robert M. and Keith, Reginald K. 2000. Noise control for buildings, manufacturing plants, equipment, and products. Houston, TX

[2] Federal Highway Administration. 2006. Roadway Noise Construction Model User's Guide. Washington, D.C.

[3] http://www.focusonequipmentrentals.com/blower/pdf/hand_back_blowers.pdf

[4] Brueck, Liz. 2008. Noise emissions and exposure from mobile woodchippers. Health and Safety Laboratory. Harpur Hill, Buxton, Derbyshire.

[5] City of Rock Island. 2005. Memorandum regarding Special Use Permit Public Hearing for 320/340 34th Avenue. Rock Island, Illinois.

Table 2.5. Noise Impact Summary for 8-hour Operating Scenarios

Equipment	8-hour Average Sound Level at 50 feet	Distance to 75 dBA-Leq Contour
Tree removal site	91.3 dBA-Leq	328 feet
Wood staging site	94.3 dBA-Leq	460 feet